

Metropolitan Transportation System: *Regional Transit*

Puget Sound Milestones

Puget Sound Regional Council

JULY 2005

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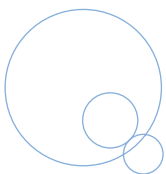
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Sound Transit, <http://www.soundtransit.org>

Transit Performance Monitoring Program

INTRODUCTION

Adopted in 1990 and updated in 1995, VISION 2020 is the long-range growth management, economic and transportation strategy for the central Puget Sound region. It provides a framework for achieving the goals of the Growth Management Act that builds upon and supports local, countywide, regional and state planning efforts. Adopted in 2001, *Destination 2030* is the functional transportation element of VISION 2020 and serves as the long-range regional and metropolitan transportation plan.

Key to realizing the vision put forth in these two documents is ensuring that the region is able to measure progress over time, determine whether planned actions are occurring, and if these actions are achieving desired results. Plan implementation and system performance monitoring is the link that connects the policies contained in the plans with real outcomes. The information generated by monitoring efforts will help provide decision makers with the knowledge and tools they need to update and refine the region's plans and programs, and to make critical choices about its future.

Working with local jurisdictions, public agencies, and others, the Regional Council has developed a monitoring program called *Puget Sound Milestones*. The program is designed to track and regularly report on the region's progress toward implementing the policies and achieving the goals put forth in VISION 2020 and *Destination 2030*.

This document is focused on establishing a baseline for monitoring public transit system performance within the central Puget Sound region. Baseline data for 2000 was initially established for regionwide performance measures in an earlier Puget Sound Milestones report (Metropolitan Transportation System: Regional Transit, July 2003). That report also included historical data (1990, 1995) of regionwide performance characteristics. Building on that report, this document includes the historical and baseline data from the earlier report as well as providing 2002 baseline data for ten major regional transit corridors. In addition, more current (2001-2003) data is also included for the regionwide performance measures. This report is not meant to evaluate progress toward stated regional policy direction at this time. Some preliminary trends are identified based on historical data but a more thorough analysis of policy will require additional data points collected in future years.

Puget Sound Milestones

The program consists of two distinct types of monitoring:

- **System Performance and Trend Monitoring:** This type of monitoring entails measuring, analyzing, and reporting on the characteristics and performance of the transportation system and regional demographic and growth trends.
- **Plan Implementation Monitoring:** This type of monitoring involves tracking and documenting local, regional, and state progress toward implementing the planned projects, programs, and policies outlined in the regional plans.

The Regional Council's program will conduct both types of monitoring to provide policymakers and the public with answers to questions like "How is the region's transportation system doing?" and "How is the region growing and changing over time?" as well as "Are we building the projects, developing the services, and implementing the policies that we planned?"

MONITORING THE METROPOLITAN TRANSPORTATION SYSTEM

Together, VISION 2020 and *Destination 2030* call for a coordinated multimodal transportation system that is integrated with and supported by regionwide growth management and economic objectives. The regionally significant components of these systems are crucial to the mobility needs of the region and make up the Metropolitan Transportation System (MTS). The MTS serves as a planning tool used to identify regional transportation problems and analyze and develop regional solutions. As such, the performance of regional MTS facilities and services must be monitored over time.

The MTS includes facilities and services that are defined both functionally and geographically. A facility or service is part of the MTS if it provides access to any activities crucial to the social or economic health of the central Puget Sound region. Facilities that weave parts of the region together by crossing county or city boundaries are critical to the MTS. Any link that accesses major regional activity centers, such as an airport, is also a critical element of the MTS. Specific facilities or services are included in the MTS based on their function within the regional transportation system rather than their geometric design or physical characteristics.

A performance-monitoring framework has been adopted and designed to analyze performance for the various MTS components within separate reports. Each report will individually consider and resolve measurement questions appropriate to the particular MTS component. Facilities in the MTS include those from the following seven transportation system components:

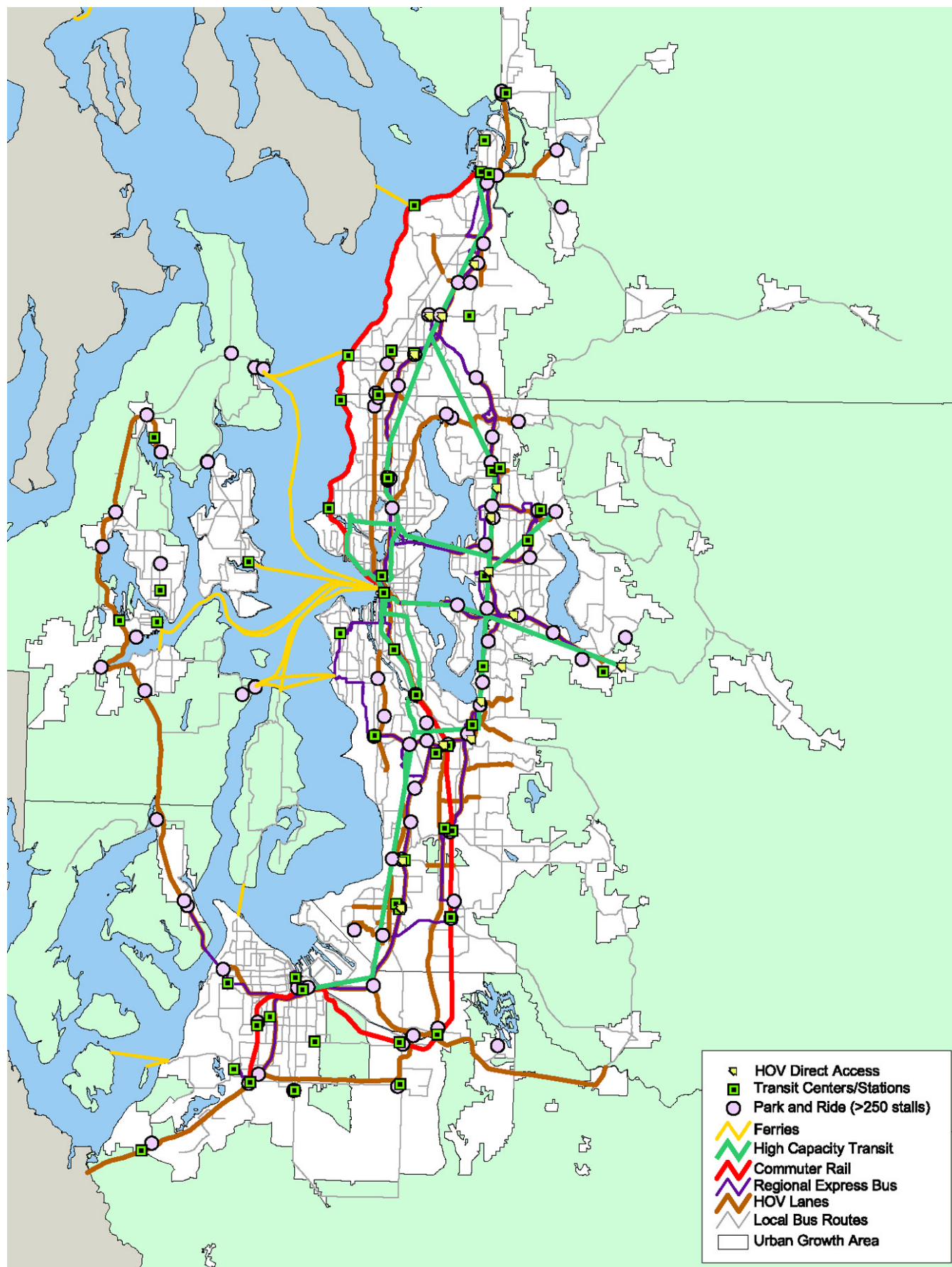
- Roadway System
- Ferry System
- Transit System
- Nonmotorized System
- Freight and Goods System
- Intercity Passenger Rail System
- Regional Aviation System
- Transportation management systems that make traffic operations safer, more efficient
- Transportation demand strategies that promote alternatives to driving alone, shift trips out of peak travel periods or eliminate the need for certain trips

This report focuses on monitoring the performance of the transit components of the MTS. The transportation “systems” that make up the public transit component of the MTS include the Transit System (land-based services) and the passenger services of Ferry System (water-based services). In addition, another important element is the freeway HOV lane network of the Roadway System. In combination, these systems comprise the elements of the transportation network that will be monitored to determine if regional objectives for transit are achieved. (See Map 1.)

The transit MTS components include:

- Existing and planned bus services that link major regional destinations and/or provide travel options in highly congested corridors.
- Existing and planned high capacity transit services (e.g., rail, bus rapid transit) providing a higher level of passenger capacity, speed, and service frequency than typical bus services.
- Existing and planned passenger ferry services and routes.
- Planned intermediate capacity transit services (e.g., monorail, priority bus, streetcar) and stations in the city of Seattle.
- Existing and planned freeway HOV lanes and direct HOV access ramps.
- Existing and planned facilities that provide connections among and between the regional transit services, including park-and-ride lots, major bus transit centers, light rail and commuter rail stations, and ferry terminals.

MAP 1. EXISTING AND PLANNED MTS: REGIONAL TRANSIT COMPONENT – 2030



Regional Policy Direction for Transit

- RT-8 Develop a transportation system that emphasizes accessibility, includes a variety of mobility options, and enables the efficient movement of people, goods and freight, and information.
- RT-8.1 Develop and maintain efficient, balanced, multimodal transportation systems which provide connections between urban centers and link centers with surrounding communities by:
- Offering a variety of options to single-occupant vehicle travel.
 - Facilitating convenient connections and transfers between travel modes.
 - Promoting transportation and land use improvements that support localized trip-making between and within communities.
 - Supporting the efficient movement of freight and goods.
- RT-8.12 Support transportation system management programs, services, and facility enhancements which improve transit's ability to compete with single-occupancy vehicle travel times.
- RT-8.13 Regional, major corridor, and urban center goals should be established that reflect regional policy intent to achieve increased proportional travel by transit, high occupancy vehicle, and nonmotorized travel modes (especially in urban centers) to achieve reduced dependence on single occupant vehicle travel, with the greatest proportional increases in urban centers. Such goals should be set for 5- to 10-year periods and periodically updated in consultation with local jurisdictions, transit agencies and WSDOT.
- RT-8.22 Support the establishment of high capacity transit stations that advance regional growth objectives by:
- a. Maximizing opportunities to walk, bike or take short transit trips to access regional transit stations.
 - b. Locating stations within urban centers and at sites supporting development of concentrated urban corridors.
 - c. Providing direct, frequent and convenient regional transit service between urban centers.
 - d. Providing system access to urban areas in a manner that does not induce development in rural areas.
- RT-8.27 Promote an interconnected system of high occupancy vehicle lanes on limited access freeways that provides options for ridesharing and facilitates local and express transit services connecting centers and communities. Assure safe and effective operation of the HOV system at intended design speed for transit vehicles while also enabling the region to assure attainment and maintenance of federal and state air quality standards.
- RT-8.28 Support the design and development of components of the regional HOV system which improve transit access and travel time relative to single occupant vehicle travel.
- RT-8.29 Promote and support the development of arterial HOV lanes and other transit priority treatments in urban areas to facilitate reliable transit and HOV operations.
- RT-8.37 Improve intermodal connections between high capacity transit stations (including ferry terminals, rail stations, and bus centers), major transit points, and the communities they serve, primarily through more frequent and convenient transit service.
- RT-8.39 Develop a high capacity transit system along congested corridors that connects urban centers with frequent service sufficient to serve both community and regional needs.

POLICY DIRECTION FOR MONITORING TRANSIT

The Puget Sound Regional Council adopted Multicounty Planning Policies under the State Growth Management Act that provide guidance for developing an improved regional transportation system. The policies contain goals for the development of a regional system made up of a variety of transportation modes that efficiently provide convenient and seamless travel options for users. The development of a regionwide network of transit services and facilities is a major component of a balanced multimodal transportation system.

The region's aggressive, long-range growth management and transportation goals depend heavily on providing more and better public transit services over the next 30 years. In addition, *Destination 2030* recognizes that transit operations are influenced by a number of variables that are not within direct control of transit agencies, such as land use patterns, pedestrian accessibility, roadway connections, HOV availability, and auto parking costs and supply. In total, the adopted policies and plan directives in *Destination 2030* call for the development of an efficient, balanced, multimodal system that:

- Provides competitive options to single occupancy vehicle travel and reduces auto-dependency.
- Increases absolute transit ridership and transit's share of all trips over time.
- Operates high capacity transit along congested corridors connecting regional centers with fast and frequent service.
- Completes an interconnected system of freeway HOV lanes for transit travel.
- Facilitates connections between all modes of travel and integrates various form of public transportation services into a seamless system.
- Promotes local transit services connecting to regional high capacity transit services.
- Expands the provision of new transit services that optimize public investments and create productive and well-used transit routes.
- Supports transit with compact land use patterns and promotes transit-oriented development at high capacity transit stations.

This regional policy direction provides a framework within which various elements of the system can be monitored over time to determine if regional direction is being achieved. The regional direction for transit system performance and development can be grouped into five major categories. The categories described below will be used to organize how transit is monitored over time.

Supply — *Expand the supply of transit services and facilities to support land use.*

Policy direction for expanding the supply of transit services calls for completing the freeway HOV lane network, establishing a system of regional high capacity transit services, building an intermediate capacity transit system within the city of Seattle, operating regional express bus routes between regional centers, adding new local fixed routes bus and demand responsive transit services, and investing in major capital facilities that will support existing and new transit services.

Plan direction describes a transit network that provides high capacity connections between the regionally designated growth centers while recognizing that adequate links should also be provided to and within surrounding communities. Priority is placed on providing high capacity transit services along congested corridors and locating stations within regional growth centers. *Destination 2030* includes specific direction for a 40 percent increase (over 2000 levels) in fixed-route transit service hours by 2010 and an 80 percent increase by 2030. A target is established for a 30 percent increase in demand response service hours by 2010 and a 65 percent increase by 2030. The plan also calls for a 75 percent increase in the number of park-and-ride stalls by 2010 and a 175 percent increase by 2030.

Use — *Increase transit ridership throughout the region and in major corridors.*

Policies for increased usage of transit call for a greater share of regional travel to be made by transit and high occupancy vehicles in order to achieve reduced dependence on single occupancy vehicle travel. *Destination 2030* is built on assumptions that result in travel demand model projections of nearly a three-fold increase in transit ridership by 2030. The highest proportional increases in transit ridership are expected to be on services providing connections to and within regional growth centers. Implicit in this direction is the need to maintain and improve transit ridership in existing markets and grow new transit markets over time. Specifically, policy RT-8.13 calls for developing regional

Statewide Benchmarks for Transit Cost Efficiency

In August 2003, the Washington State Transportation Commission adopted a set of benchmarks for measuring the performance of the state's transportation system. As required by 47.01.012, benchmarks were established in the following areas: travel safety, pavement and bridge condition, traffic congestion and travel delay, per capita vehicles miles traveled, non-auto share of commute trips, administrative efficiency, and transit cost efficiency. To address transit cost efficiency, four individual statewide measures were established: 1) transit operating cost per total hour, 2) boardings per revenue hour, 3) operating cost per revenue mile, and 4) operating cost per boarding. The measures are calculated based on statewide data for fixed route and demand response service as well as for urban, suburban, and rural service areas. The most recent Transportation Benchmarks Update report (June 2004) provides statewide data for 1997-2002 for each of these measures. The Puget Sound Regional Council's monitoring effort addresses similar regionwide transit cost efficiency measures, including costs per hour and costs per boarding. For comparative purposes, future Regional Council transit monitoring reports will include references to statewide measures as additional data is collected.

benchmarks that promote a greater share of regional travel to be made by transit, high occupancy vehicles, and nonmotorized travel modes.

Efficiency — *Operate transit services and facilities efficiently and cost-effectively.*

There is direction throughout the regional plan for providing public facilities and services in an efficient and cost-effective manner. Efficiency and effectiveness measures will evaluate the ability of the region's transit agencies to provide services and meet demand for transit given available financial resources. The financial viability of public transportation agencies is key to achieving associated regional benchmarks and is an important part of this monitoring effort. Additionally, the Washington State Transportation Commission has established cost efficiency benchmarks for transit as required by RCW 47.01.012. The efficiency measures developed by the Regional Council are consistent with benchmarks reported by the Commission.

Quality — *Improve the convenience and reliability of transit services regionwide.*

Destination 2030 policies address the "quality" of transit services that should be provided to meet plan objectives. Specifically, policies call for greater frequency of services, increased reliability, and better transit travel times relative to single occupant vehicle travel. Policies state that travel time is an important characteristic of transit's ability to compete effectively with single-occupant vehicle travel, and that speed — and therefore travel time for the user — is a key characteristic of competitive service. This direction can be used to craft important measures in evaluating the quality of regional transit services.

Access — *Facilitate access to transit services for all travel modes.*

Transit accessibility is a measure of how fast, easy, and convenient it is for people to get to available transit services. Plan policy emphasizes the need to consider all travel mode connections, including auto access, feeder bus connections, walking, and biking. The plan calls for a variety of investments that will improve facilities that support better access, such as park-and-ride lots, transit transfer stations, walking paths, street crossings, and biking routes. In addition, there is considerable direction for promoting land development patterns that improve transit accessibility by putting more homes, stores, and jobs in close proximity to transit services. Specifically, there is direction for pedestrian-friendly design and transit-oriented development within regional growth centers and in the vicinity of major regional transit stations.

SCOPE OF THE TRANSIT MONITORING PROGRAM

The Transit Monitoring Program will measure the collective impact of the public transportation agencies in the region related to the policy direction described above. There are currently six transit providers operating land-based transit services: Everett Transit and Community Transit in Snohomish County; Metro Transit in King County; Kitsap Transit in Kitsap County; Pierce Transit in Pierce County; and Sound Transit in King, Pierce and Snohomish counties. The Washington State Ferry System provides water-based connections across Puget Sound to various points in King, Kitsap, and Snohomish counties. Ferry system

performance is measured and analyzed in the *Metropolitan Transportation System: Roadways and Ferries* (April 2003) *Puget Sound Milestones* report. The Seattle Monorail Project is the newest transit agency in the region and plans to operate services in the city of Seattle by 2010.

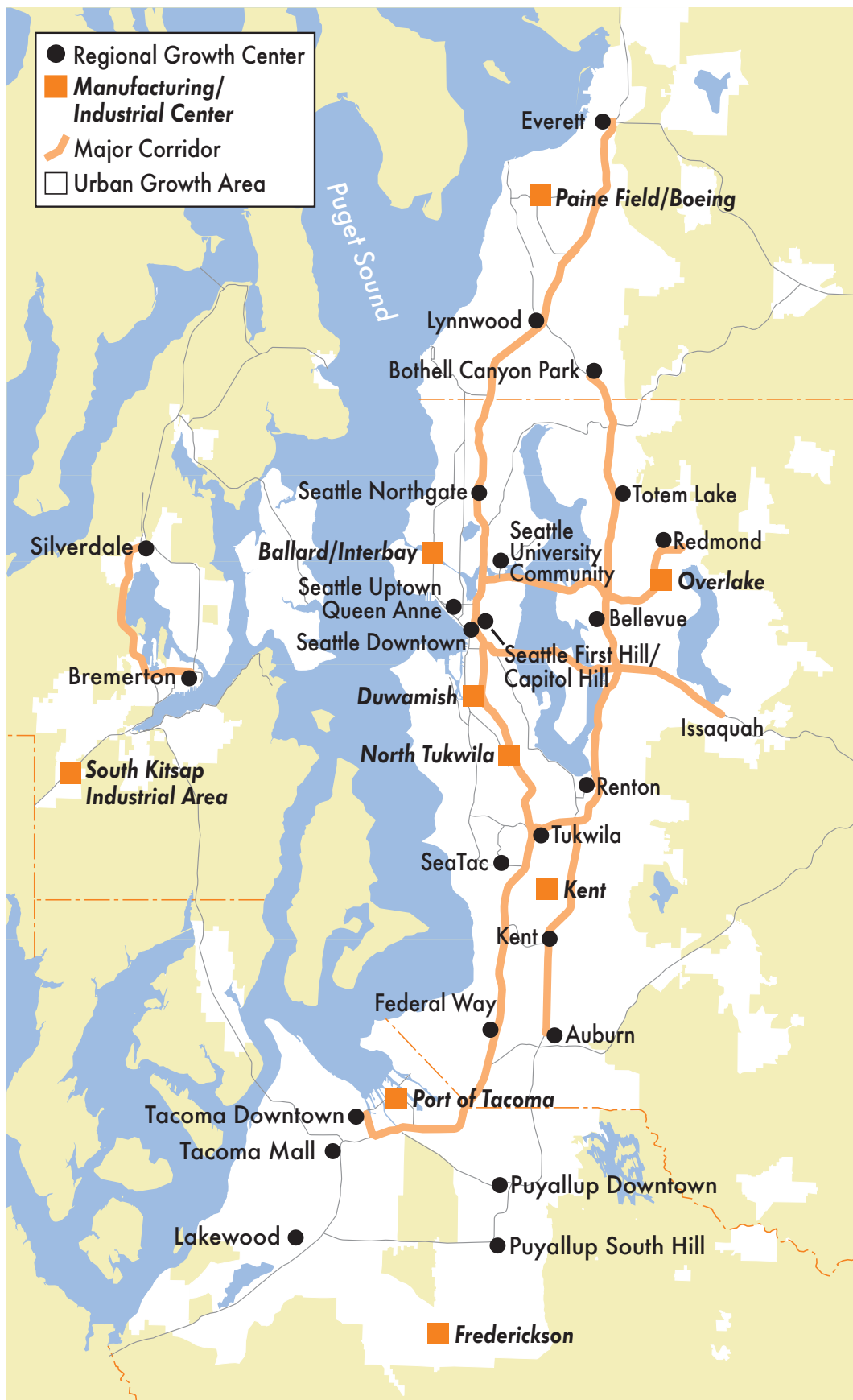
This report is intended to establish baseline year data for monitoring transit performance over time. It represents an update to a previous transit monitoring report that was released in July 2003. The previous report focused solely on *regionwide* performance measures based on data for the year 2000. The information in this report includes all of the same *regionwide* performance data contained in the July 2003 document as well as providing updated data (2001-2003) for each of the *regionwide* performance measures (see Chapter 2). In addition, this report includes *corridor specific* performance data (2002) for ten major transit corridors in the region. Future transit monitoring reports will be prepared that include updated data on each of the transit performance measures contained in this document. Over time, sufficient data should be available to make critical judgments regarding the region's progress toward achieving regional policy objectives.

Types of Transit Services. The transit monitoring effort will address three major types of transit service, including: 1) fixed route services, 2) demand response services, and 3) vanpool service. Fixed route transit service includes services that operate on a fixed schedule basis along a specific, pre-determined route. Fixed route service includes regular bus routes, commuter rail, light rail, monorail, and ferry routes. Demand response, sometimes referred to as dial-a-ride or paratransit, is service characterized by flexible routing and scheduling providing point-to-point transportation at a passenger's request. Vanpool services are generally considered a type of public transit service and are largely administered by the local transit agencies. Vanpool services include a variety of worker/driver and subscription bus services that generally are focused on getting passengers between their home and work place. Some limited information on vanpool performance is included in this report but a more in-depth evaluation and analysis can be found in the *Metropolitan Transportation System: Transportation Demand Strategies Puget Sound Milestones* report (February 2005).

Geographies Monitored. Transit performance measures are developed for two geographic areas: 1) *regionwide*, and 2) along major *corridors* linking regional growth centers. Map 2 depicts the regionally designated centers and major corridors evaluated in this report. *Regionwide* measures aggregate information for all of the transit operators in the four-county region. The *regionwide* measures provide an overall sense of how activities throughout the region are cumulatively working toward regional objectives. Performance measures for transit services along major corridors build on the *regionwide* data to improve regional understanding of where and how well transit is able to provide a competitive travel alternative linking regional growth centers. A more detailed assessment of growth and travel characteristics to and within major centers can be found in the *Central Puget Sound Regional Growth Centers* (December 2002) *Puget Sound Milestones* report.

Monitoring Time Frame. The primary purpose of the initial performance measures will be to establish a baseline from which to measure progress over time in meeting VISION 2020 and *Destination 2030* policy objectives. The base year established for *regionwide* data is 2000 and the base year for corridor specific data is 2002. To provide some perspective to the base year data, *regionwide* measures are also reported for 1990, 1995 and 2001-2003. Major corridor and center-to-center travel data was not consistently or comprehensively available prior to 2002 and is therefore not included here. Where it is available, data will be provided for future year targets that have been set out in the adopted regional plan or transit agency projections. The combination of historical information and projected targets will help to provide a framework for evaluating future progress. It is also intended to help local officials, planning staff, and the public better understand the challenges faced by local transit providers.

MAP 2. REGIONAL GROWTH AND MANUFACTURING/INDUSTRIAL CENTERS AND MAJOR CORRIDORS — 2004



Measures of Transit Performance: Regionwide

The transit performance measures developed for this chapter provide regionwide aggregate information from each of the existing transit operators in the region. These regionwide measures will be used to monitor progress toward achieving *Destination 2030* objectives. The measures address the following policy objectives: 1) the *supply* of transit services and facilities, 2) the *use* of those services, and 3) the *efficiency* of providing services. This chapter focuses primarily on fixed route and demand response services, which represent the bulk of the public transportation market. The historical data (1990 and 1995) and base year data (2000) included in this chapter were initially reported in a *Puget Sound Milestones* document published in July 2003.¹ More recent data (2001-2003) is incorporated for each of the regional performance measures in this updated report (see Figures 2 – 12).

SUPPLY — EXPAND THE SUPPLY OF TRANSIT SERVICES AND FACILITIES TO SUPPORT LAND USE AND TRAVEL DEMAND

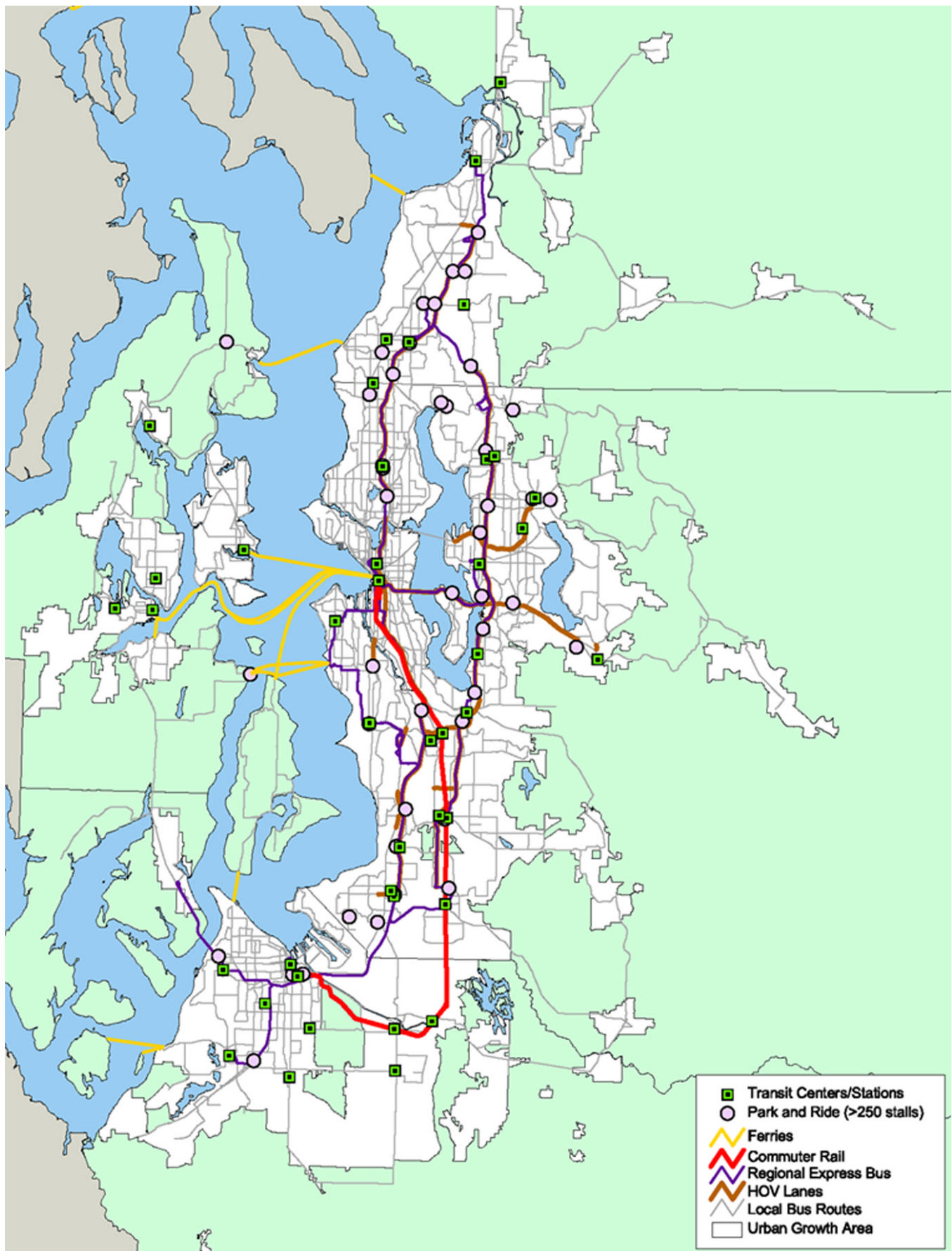
Destination 2030 contains a description of the planned improvements to the transit system for 2010 and 2030. The planned improvements include: completion of the HOV lane system and construction of HOV access ramps, development of a regional high capacity transit system (rail, bus, ferry), establishment of an intermediate capacity transit system in Seattle, operation of bi-directional regional express bus routes, expansion of park-and-ride capacity, and improvement to local services and facilities. In addition, the plan calls for investments in capital facilities (e.g. park-and-ride lots, transit centers, vehicles, bus shelters, and bike lockers) to support existing and new transit services. Plan policies promote investments in facilities that support access to and development of regional growth centers.

High Occupancy Vehicle (HOV) Lane System. In 2000, 198 lane miles of freeway HOV facilities were open to traffic, more than doubling the lane miles since 1990. HOV lanes were completed on major portions of Interstates 5, 90, and 405, and on State Routes 167 and 520. Whereas the HOV lane network was fragmented and unconnected in 1990, it now functions as a system of interconnected facilities as envisioned in the regional plan. The HOV lane network is further supported by operating HOV queue bypass on freeway on-ramps. A system of 300 HOV lane miles and 12 HOV direct access ramps are planned for future implementation.

High Occupancy Vehicle (HOV) Lane System. In 2000, 198 lane miles of freeway HOV facilities were open to traffic in the central Puget Sound region, more than doubling the lane miles since 1990. HOV lanes were completed on major portions of Interstates 5, 90, and 405, and on State Routes 167 and 520. Whereas the HOV lane network was fragmented and unconnected in 1990, it now largely functions as a system of interconnected facilities as envisioned in the regional plan. The existing system of completed lanes (over 200 miles in 2004), primarily in King and Snohomish counties,

¹ Metropolitan Transportation System: Regional Transit, *Puget Sound Milestones*, Puget Sound Regional Council, July 2003

MAP 3. EXISTING TRANSIT MTS: TRANSIT COMPONENT PLUS HOV LANES — 2000



links many of the regionally designated growth centers. The HOV lane network is further supported by HOV queue bypass on freeway on-ramps. By 2004, construction was complete on direct HOV access ramps in Bellevue and Lynnwood and is currently underway in Federal Way. A total of 300 HOV lane miles and 12 HOV direct access ramps are planned for future implementation.

High Capacity Transit (HCT) System. Commuter rail service began operation in September 2000 with two trains running in each direction between Tacoma and Seattle daily. Commuter rail stations were operating in the following locations: Seattle, Tukwila, Kent, Auburn, Puyallup, Sumner, and Tacoma. More train runs were soon added in the south corridor and commuter rail is now running between Seattle and Everett. The Downtown Seattle Transit Tunnel and the E-3 busway are also used to support existing high capacity transit services. Light rail service is currently operating between downtown Tacoma and the Tacoma Dome station and Central Link (between downtown Seattle and SeaTac) is expected to operate service by 2010. Other elements of the high capacity transit system are still in the conceptual planning stage.

Intermediate Capacity Transit (ICT). The regional plan includes six Intermediate Capacity Transit (ICT) routes for potential future implementation in the city of Seattle. In 2002, Seattle voters approved a ballot measure that provided funding for the initial segment, a monorail line running from West Seattle through downtown Seattle to Ballard. This initial segment, known as the Green Line, is expected to be operating in 2009. Future phases of ICT in the city of Seattle are currently in the planning stage.

Regional and Local Bus Routes. In 1999, Sound Transit began operation of nine regional express bus routes providing connections to a number of major regional centers along the freeway HOV lane system. By the end of 2000, 21 express bus routes were in operation. Local transit agencies operated another 416 fixed routes in 2000. In total, the number of fixed transit routes (local and regional express) increased 98 percent between 1990 and 2000. By 2004, Sound Transit was operating 24 express bus routes and total fixed routes throughout the region.

Transit Centers and Park-and-ride Lots. In addition to new commuter rail stations, investments were made to ten new or expanded bus transit centers between 1990 and 2000. In 2000, there were 26,165 park-and-ride stalls in 167 lots throughout the region. This reflects an increase of over 12,000 stalls since 1990. Park-and-ride utilization rates vary around the central Puget Sound region, but on average have consistently achieved 80 percent occupancy. Many lots are at or exceed available capacity including those in Issaquah, Bellevue, Renton, Federal Way, and Parkland. Utilization rates are reported by corridor in Chapter 3. Significant park-and-ride capacity will need to be added in the future to meet the estimated demand projected in *Destination 2030*, nearly doubling the number of park-and-ride stalls by 2010. Progress is already being made with almost 7,800 stalls added between 2000 and 2003, with the regionwide total now exceeding 34,000 stalls (see Figure 1).

Transit Vehicles. The number of transit vehicles (including commuter rail cars, buses, paratransit vehicles, and vanpools) increased from approximately 1,500 vehicles in 1990 to almost 2,500 in 2000. By 2003, total vehicles numbered almost 2,600. The approximately 1,500 vanpools in the region represent the largest fleet in the nation on a per capita basis. The fixed route bus fleet now includes electric trolleys, articulated, low-floor, dual-power, as well as an expanded fleet of natural gas powered vehicles. In addition, Community Transit, King County Metro, Kitsap Transit, and Pierce Transit have added bike racks to all fixed route buses. Bike parking is now provided at many park-and-ride lots and at all transit centers and stations. A new bike station providing secure bike storage is now operating in the vicinity of King Street Station and others are planned at transit stations in Tacoma, Everett, and Seattle.

FIGURE 1. PARK-AND-RIDE STALLS

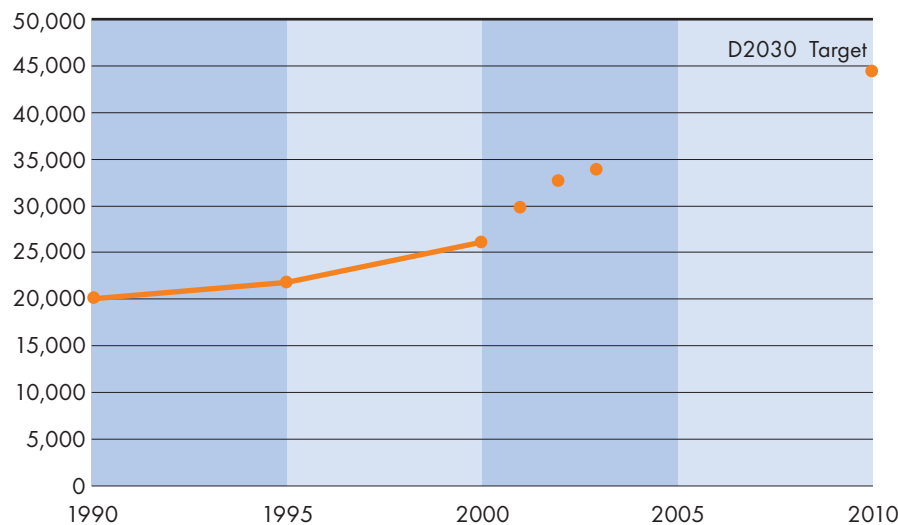
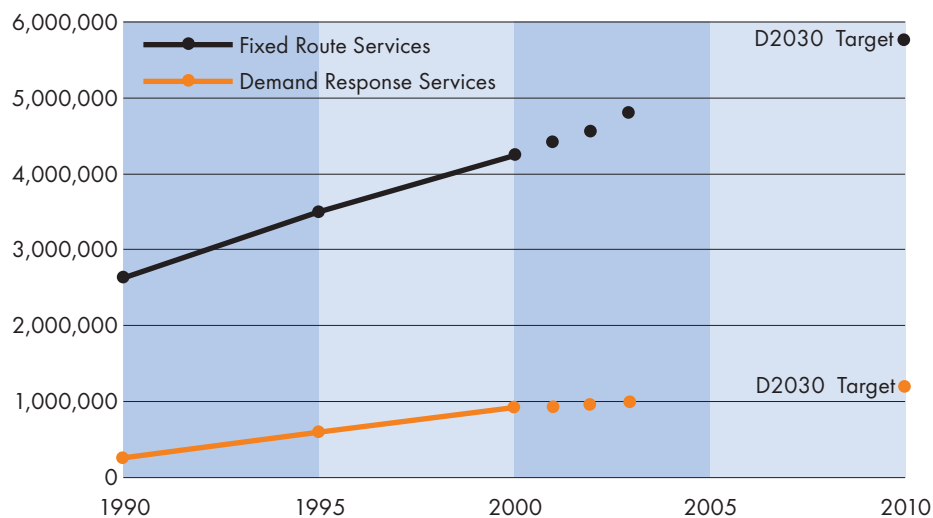


FIGURE 2. TRANSIT SERVICE HOURS



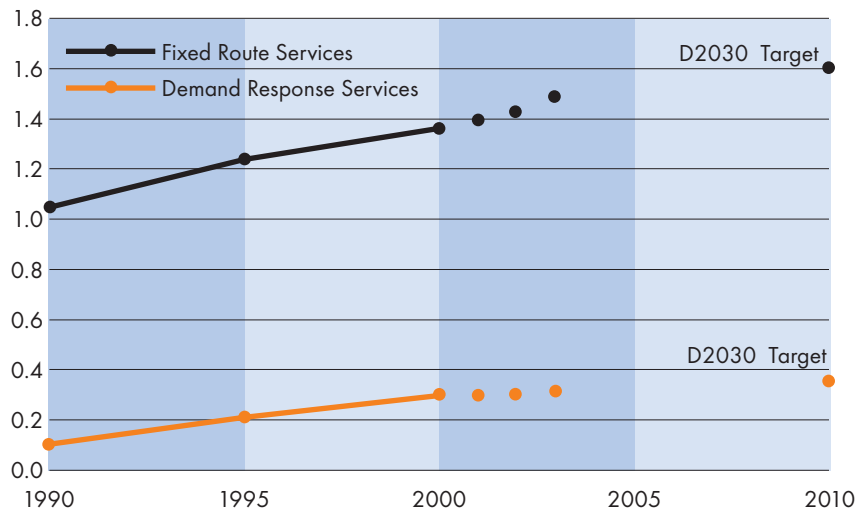
Transit service hours, also referred to as revenue vehicle service hours, are the measurement in hours that a public transportation system operates each vehicle (not including time to or from the assigned route). The total number of fixed route service hours increased from 2.6 million in 1990 to 4.2 million in 2000, an increase of 65 percent over the decade (see Figure 2). Transit service hours for fixed route services experienced significant increases throughout the 1990's with an annual rate of growth of about 6 percent. The addition of Sound Transit express bus services contributed to this growth in the later part of the decade. Between 2000 and 2003, fixed route transit service hours continued to increase at a similar rate, roughly 5 percent annual increase.

Service hours for demand response services also increased throughout the 1990s but at a slower rate than fixed route services, less than 3 percent annually. Much of the increase in demand

response services was a direct result of new ADA requirements established in 1993. Between 2000 and 2003 demand response hours have also continued to rise but at a much slower rate, less than 1 percent increase.

On a per capita basis, transit service hours are increasing at a faster rate than population growth. This is especially true of fixed route service hours, which grew at an annual rate of almost 2 percent.

FIGURE 3. TRANSIT SERVICE HOURS PER CAPITA



Targets for increasing service hours were established in *Destination 2030* for both fixed route services and demand response services. The plan calls for a 40 percent increase (over 2000 levels) in fixed route transit service hours by 2010 and a 30 percent increase in demand response service hours. Data for 2001 through 2003 demonstrate continued progress toward achieving these targets (see Figure 3).

Service miles rather than service hours better measure vanpool service increases. Service miles for vanpools increased from 5 million miles in 1990 to over 16 million miles in 2000.

USE — INCREASE RIDERSHIP THROUGHOUT THE REGION AND IN MAJOR CORRIDORS

The use of transit services or ridership is generally measured by transit “passenger trips.” A transit passenger trip is one person making a one-way trip from origin to destination. If the person transfers to another vehicle or mode of travel en route to the final destination that is another trip (also referred to as an “unlinked passenger trip”). One round trip is two passenger trips.

Regionwide, the total number of passenger trips for fixed route service grew from approximately 98 million trips in 1990 to 130 million in 2000, a 33 percent increase over the decade (see Figure 4). Growth in transit trips was somewhat slow in the early 1990s but has increased significantly since 1995. On a percentage basis, the increase in demand response trips was greater than fixed route trips. However, the impact on total trips is less because fixed route services account for 60 times more trips than demand response services. Total transit passengers dropped slightly between 2001 and 2002 but rebounded again in 2003. This was true for both fixed route and demand response ridership (see Figures 4, 5 and 6).

FIGURE 4. TOTAL TRANSIT PASSENGER TRIPS — Fixed Route and Demand Response Services

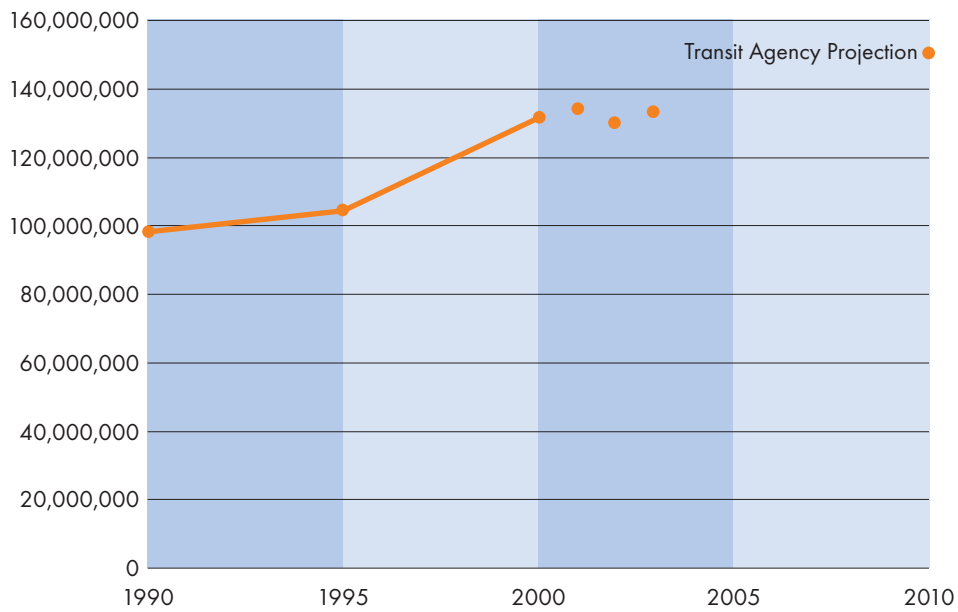


FIGURE 5. TRANSIT PASSENGER TRIPS — Fixed Route Services

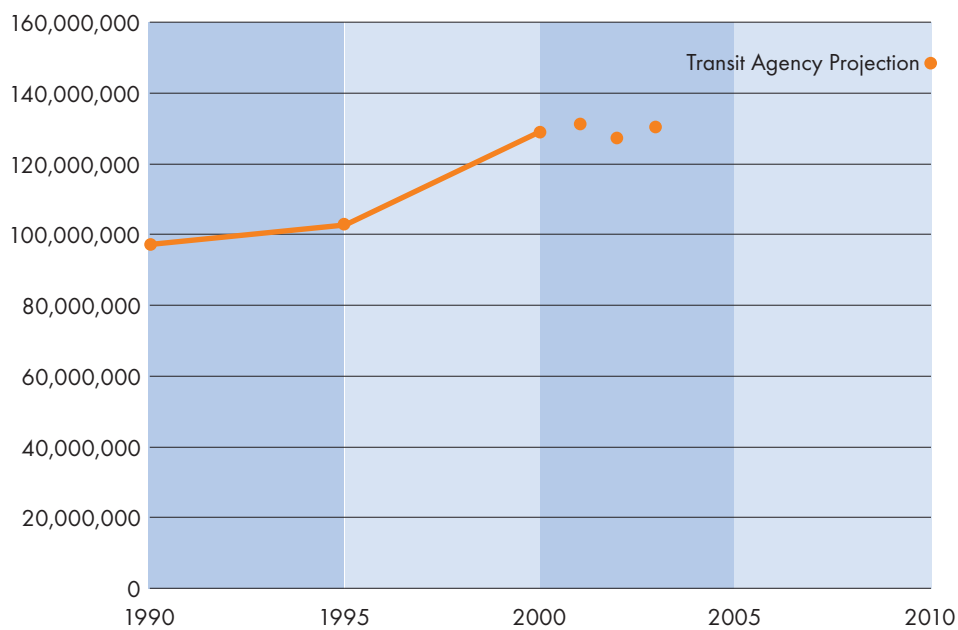
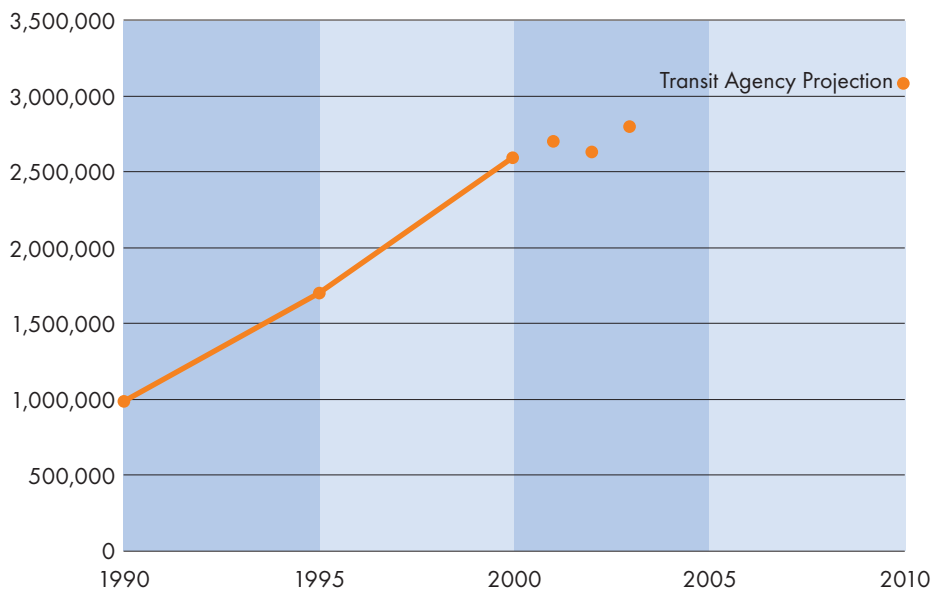


FIGURE 6. TRANSIT PASSENGER TRIPS — Demand Response Services

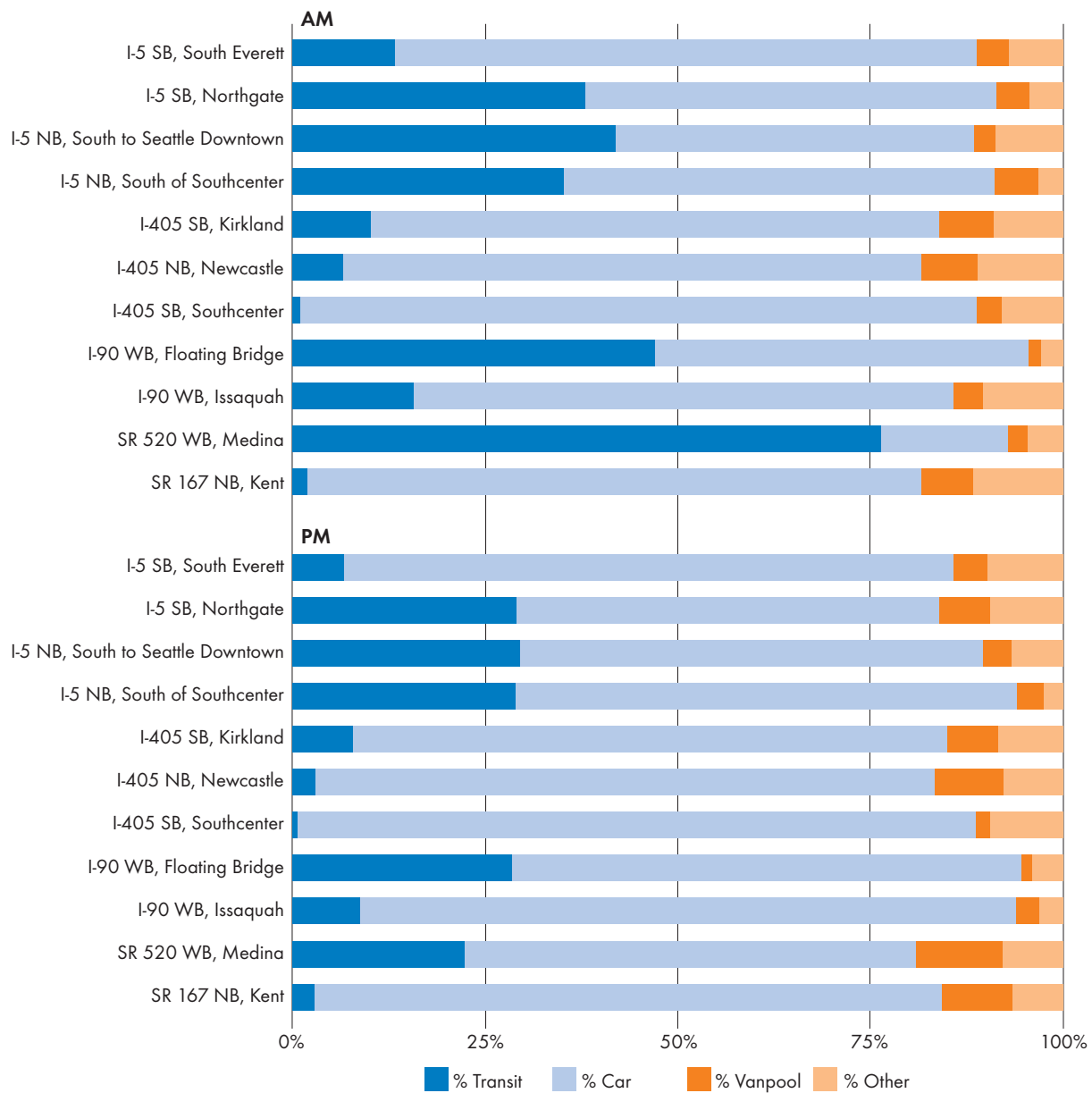


Throughout much of the region, the vast majority of transit passenger trips are by fixed route bus except for residents of Kitsap County where the largest percentage of public transportation trips is by ferryboat. On a per capita regionwide basis, total passenger trips for fixed route and demand response services increased from 39 to 42 trips per person between 1990 through 2000 (see Figure 8). Although the increase is small, it is impressive that transit ridership was able to more than keep pace with the significant increase in population over the past decade. Keeping pace with population growth has proven more difficult recently. Between 2000 and 2003, per capita ridership dipped to approximately 41 trips. Vanpool passenger trips increased from 1.5 million in 1990 to 3.5 million in 2000, more than double.

The substantially complete HOV lane network facilitates many of these transit passenger trips. Figure 7 shows the percentages of people carried by buses, cars, and vanpools in HOV lanes along major corridors during peak periods.

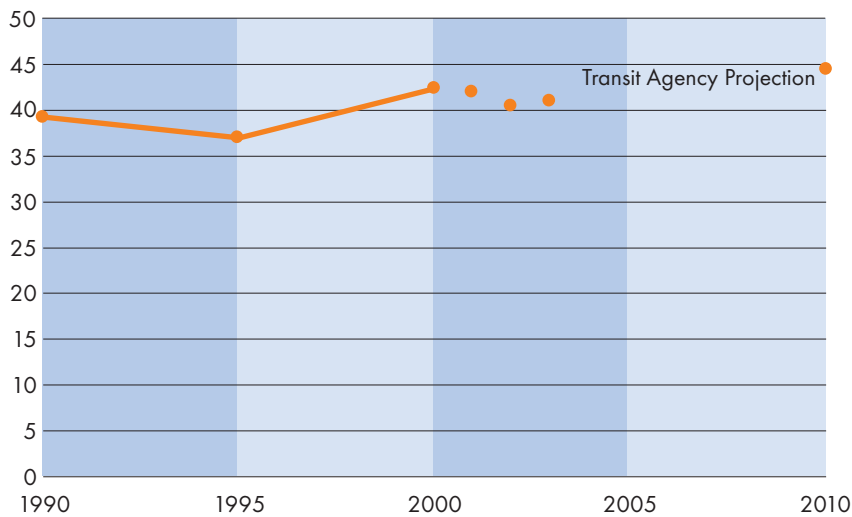
For both AM and PM peak periods, I-5 shows high transit ridership; between 29 and 42 percent of the people traveling in the HOV lanes at selected sites are carried by buses. The significant use of transit buses in this corridor allows the HOV lane to move considerably more people than the adjacent general-purpose lanes. On westbound SR 520 during the morning commute period, buses carried 76 percent of all people traveling in the HOV lane, attributable in part to a three-person minimum occupancy for cars, a carpool size more difficult to organize and maintain.

**FIGURE 7. PERCENTAGE OF PEOPLE CARRIED IN HOV LANES
BY DIFFERENT MODES OF TRAVEL DURING PEAK PERIODS – 2002**



Source: HOV Lane Performance Monitoring: 2002 Report

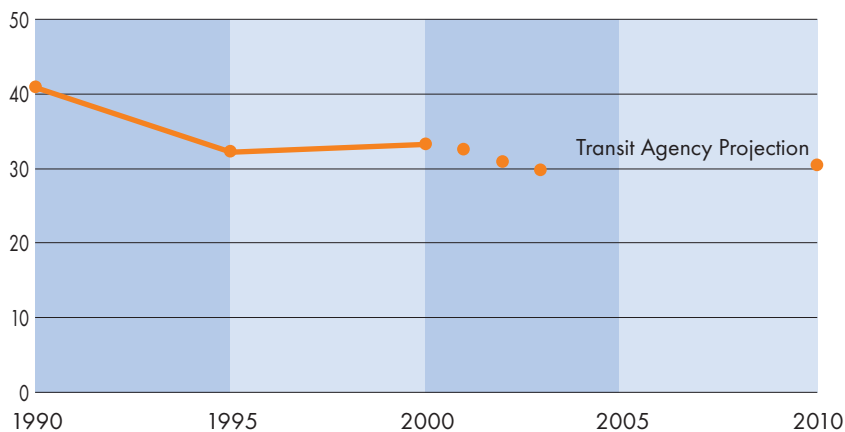
FIGURE 8. TOTAL TRANSIT PASSENGER TRIPS PER CAPITA



As a percentage of available service hours, passenger trips on fixed routes services have seen a gradual decline since 1990 (see Figure 9). The most dramatic drop-off occurred between 1990 and 1995 before leveling off a bit between 1995 and 2000. Over the decade, fixed route trips per hour fell from 37 in 1990 to 28 in 2000. Demand response ridership also dropped on a per hour basis since 1990, decreasing from slightly less than 4 trips per-hour to about 3 trips per hour in 2000. The dramatic difference in trips per hour between fixed route and demand response reflects the significant differences in the two types of service.

Transit operators in the region have identified a number of issues that have influenced the drop in passenger trips per service hour, including the rapid increase in new transit service hours over the decade, a move toward serving emerging or developing markets in suburban areas, and the increasing levels of congestion on major roadways. Between 2000 and 2003, passenger trips per hour continued to decline gradually to approximately 30 passengers per service hour.

FIGURE 9. TOTAL TRANSIT PASSENGER TRIPS PER SERVICE HOUR



U.S. Census – Journey to Work

Between 1990 and 2000, the share of commute trips supported by public transportation has increased steadily. The public transit share of total work trips increased from 6.4 percent in 1990 to 7.1 percent in 2000. Given the rapid employment growth during the decade, this small percentage change in public transit use represented a 30 percent increase in daily commute trips by transit. All counties in the region saw an increase in the share of total trips on public transportation. Pierce County experienced the greatest percentage increase in transit use for commute trips during the 1990s, a 62.1 percent rise. King County continued to have the highest total share of work trips by public transportation, increasing from 8.7 in 1990 to 9.6 in 2000. The U.S. Census defines public transportation to include ferry and taxi riders but not vanpool riders.

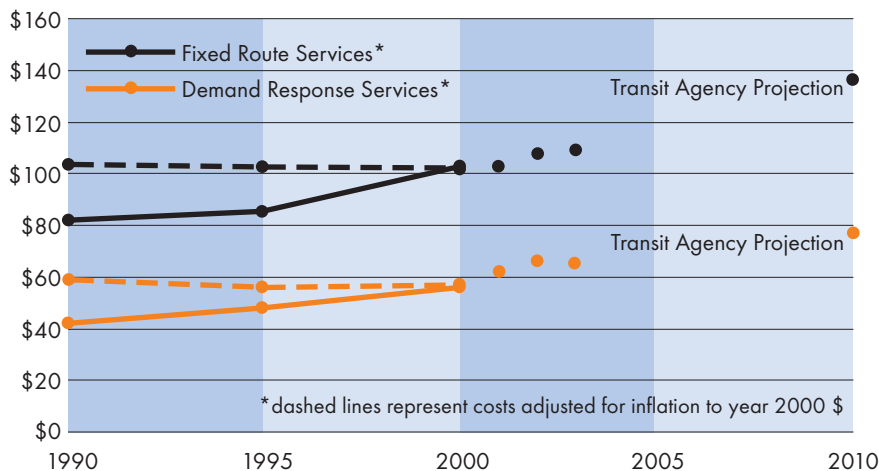
Source: U.S. Census, Census Transportation Planning Package, 1990 - 2000

EFFICIENCY — OPERATE TRANSIT SERVICES AND FACILITIES EFFICIENTLY AND COST-EFFECTIVELY

Measures such as cost per rider and cost per service hour provide indicators of how efficient a transit system is operating. These measures show how effectively service is provided in a cost-effective manner, and can drive decisions to improve efficiency and service to a community.

Operating expenses are evaluated to determine the relative cost efficiency of transit operations. Operating expenses include the sum of funds expended for vehicle operations, vehicle maintenance, non-vehicle maintenance, and general administration costs. It is important to note that in urban areas, overhead and the number of operating bases for vehicles affect operating costs per service hour and operating costs per passenger trip. Typically, it costs more to provide fixed route service per service hour than it does per passenger trip. The reverse is true for demand response service.

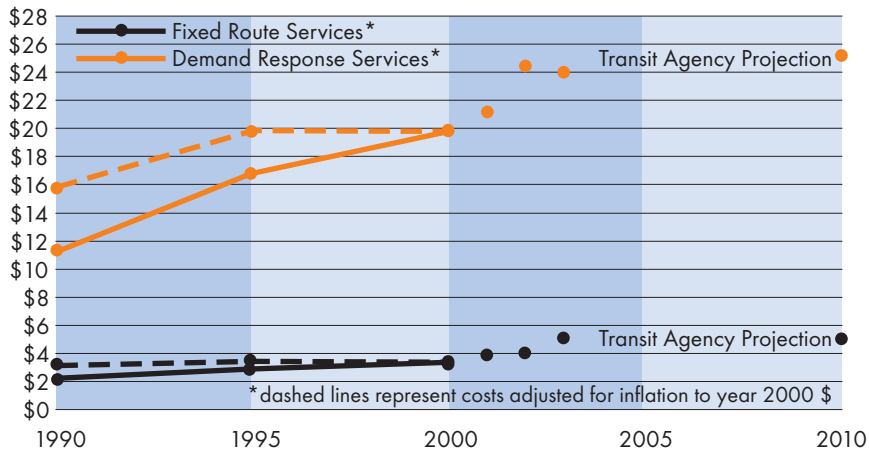
FIGURE 10. OPERATING COST PER SERVICE HOUR



Annual operating costs per transit service hour have increased steadily since the mid 1990's. Annual operating expenses for fixed route services increased from just over \$81 per revenue hour in 1990 to close to \$103 in 2000, a 27 percent increase. Demand response costs reached \$56 per service hour in 2000, about 32 percent higher than in 1990. Much of the increases in operating costs per service hour can be accounted for by inflation (see costs adjusted for inflation on Figure 10). Maintaining service costs per hour at roughly the rate of inflation is an accomplishment given that transit's largest cost categories are increasing. In particular, transit operators have identified rapid growth in labor costs as a major source of escalating operating expenses. Between 2000 and 2003, operating costs per hour continued to rise, reaching \$110 per service hour in non-adjusted dollars.

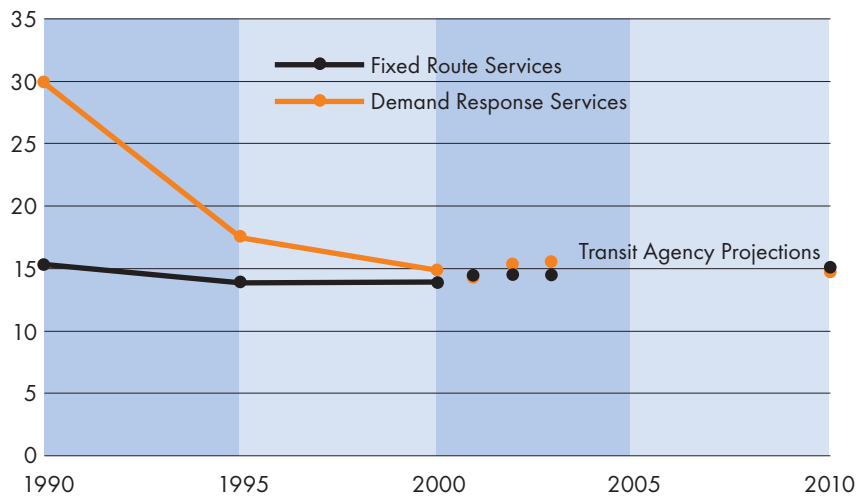
Operating costs per passenger trip increased at a faster percentage rate than operating costs per hour (see Figure 11). There has been a significant increase in the operating cost per passenger trip for demand response services, from \$11 per trip in 1990 to almost \$20 in 2000. The rate of increase for fixed route services was much more gradual, increasing from \$2.20 per trip in 1990 to about \$3.60 per trip in 2000. Inflation can account for much of the increase in fixed route costs per trip but not for demand response costs. Transit operators cite ADA requirements as a major influence on the escalating costs for demand response per trip. Costs per passenger trips have continued to increase for both fixed route and demand response services between 2000 and 2003, exceeding \$5 and \$24 respectively.

FIGURE 11. OPERATING COST PER PASSENGER TRIP



Beyond inflation, both the operating cost per service hour and passenger trip have been influenced by the changes in the operating environment within which transit operates, such as increased suburbanization and traffic congestion. For example, in first five years of the decade (1990-1995) the number of fixed route miles of service provided for each service hour decreased steadily before leveling off between 1995 and 2000 (see Figure 12). Conversely, demand response service miles per service hour rose early in the decade and declined since 1995. Both were approximately 15 service miles per hour of service in 2000. These changes in service miles per service hour reflect the shifting demands of both fixed route and demand response service over the decade. Demand response service characteristics during the 1990's were influenced by the federal American Disabilities Act (ADA).

FIGURE 12. SERVICE MILES PER SERVICE HOUR



Measures of Transit Performance: Major Corridors Connecting Regional Growth Centers

The continued development and support of regional growth centers remains a core component of the central Puget Sound growth strategy. Regional growth centers and manufacturing/industrial centers have been designated in the region because they serve as important regional hubs that will be linked with public transit services, investments, and high capacity transportation. This chapter examines transit characteristics and performance along major travel corridors linking regional growth centers to assess how the region is meeting stated policy objectives.

Transit performance information developed for this chapter includes data provided by the transit operators serving major corridors that connect regional growth centers. These transit operators include Community Transit, King County Metro, Pierce Transit, Kitsap Transit, and Sound Transit. Everett Transit provides primarily local services in the city of Everett and is not included in the corridor level data. As part of the Regional Council's Congestion Management System (CMS) data collection effort, transit operators were asked to provide frequency and ridership information for selected locations in their service areas. Each agency reported travel data for Fall 2002 fixed route services. No data was collected for demand response services.

Regional policy calls for programs, services and facility enhancements that improve transit's ability to compete effectively with single occupant vehicle travel. To evaluate transit's level of competitiveness with automobile travel, performance measures are presented in a similar format as measures of highway performance in the *Roadway and Ferries Puget Sound Milestones* report (April 2003). Corridor level measures in this report address: 1) the *supply* of transit services and facilities, 2) the *use* of these services, 3) the *quality* of transit services, and 4) *access* to transit services. The *efficiency* of providing transit services is not measured at the corridor level in this report.

Supply— Expand the supply of transit services and facilities to support land use and travel demand.

Transit Centers and Park-and-Ride Lots. For each corridor, a table lists regionally significant park-and-ride lots (i.e., minimum of 250 parking stalls) and their corresponding capacity and utilization rates. Regional transit centers are defined as locations with facility and access improvements focused on providing transfer opportunities to or between one or more regionally significant transit routes.

Headways. Headways are a measure of frequency of service. Data is reported on the average number of buses passing selected points along a corridor, by direction, for a.m. peak hours and over a 24-hour period.

Bus routes. Various types of bus routes serve regional growth centers linked along major corridors, including express and local services. Data is reported for the total number of routes serving regional growth centers along major corridors operating to and from transit centers and regionally significant park-and-ride lots.

HOV Lanes. Regional transit services are also represented on the transit component of the Metropolitan Transportation System by the transportation facilities they use, which include HOV lanes and exclusive transit right-of-ways. Corridor specific information on the status of HOV lane completion and operating characteristics is included.

Use — Increase ridership throughout the region and in major corridors.

The use of transit services or transit ridership is generally measured by passenger trips. Data is reported for average total passenger trips passing selected points within major travel corridors, by direction, for a.m. peak hours and over a 24-hour period. The highest proportional increases in transit travel are expected to be on services providing connections to and within regional growth centers. For each major corridor, data from the 2000 U.S. Census is reported on journey to work characteristics, showing the percentage of people using public transportation (includes bus, streetcar, elevated transit, railroad, and ferry) to commute from home to work in a regional growth center.

Quality — Improve the convenience and reliability of transit services regionwide.

Destination 2030 policies call for greater frequency of services, increased reliability, and better transit travel times relative to single occupant vehicle travel. Average travel times for the fastest route between regional growth centers within major travel corridors during the a.m. and p.m. peak periods are provided as well as graphs comparing HOV lane and general purpose lane travel times.

Access — Facilitate access to transit services for all travel modes.

Destination 2030 policies call for investments that will improve facilities that support better access, such as park-and-ride lots, sidewalks, street crossings, and biking routes. Information on the availability of bicycle racks and parking and/or storage lockers at park-and-ride lots and transit centers is included. There is currently limited data on pedestrian amenities and access. Performance measures related to improving pedestrian access will be reported in future transit monitoring reports.

EVERETT TO SEATTLE (Via I-5)

The Everett to Seattle corridor connects downtown Everett and downtown Seattle via I-5, a distance of approximately 27 miles.

Seven Regional Growth Centers are within this corridor. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

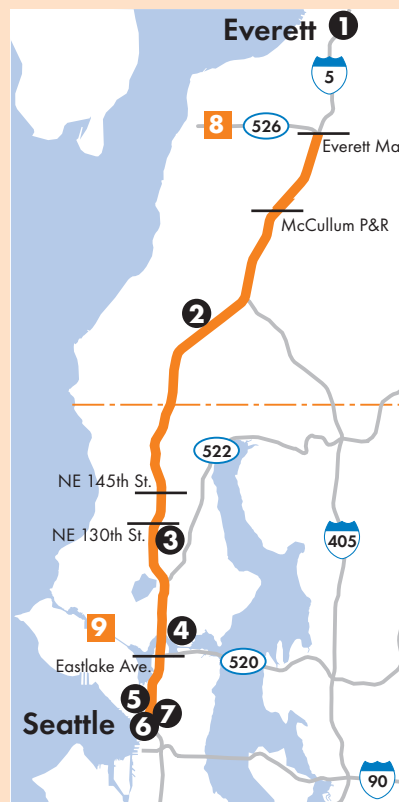
- Everett – 2.8%
- Lynnwood – 2.8%
- Seattle Northgate – 5.8%
- Seattle University Community – 22.3%
- Seattle First Hill/Capitol Hill – 16.8%
- Seattle Downtown – 35.6%
- Seattle Uptown Queen Anne – 11.9%

In addition, the corridor serves the Paine Field/Boeing and Ballard/Interbay Manufacturing/Industrial Centers.

Community Transit, King County Metro and Sound Transit provide service along this corridor. Community Transit and Sound Transit serve the Everett Station and Lynnwood Transit Center while King County Metro and Sound Transit operate through the Northgate Transit Center. Community Transit serves eight regionally significant park-and-ride lots while King County Metro and Sound Transit serve five. Community Transit operates 39 routes serving centers within this corridor while King County Metro operates 23 and Sound Transit operates seven. (For park-and-ride and transit center locations, see map 1, page 3.)

Except for a segment between SR-526 and downtown Everett, this corridor has continuous freeway HOV lanes open to traffic. In 2000, 100,529 people and 48,914 households were located within ¼ mile of the I-5 facility, representing 4 percent of the population and 5 percent of the households in Snohomish and King Counties. Over 175,000 jobs were located within ½ mile of the I-5 facility, representing 13 percent of Snohomish and King County employment.

Data sources: U.S. Census Bureau, Community Transit, King County Metro, Sound Transit, WSDOT, PSRC.



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Everett	4,955	10,709
2 Lynnwood	3,118	12,118
3 Seattle Northgate	5,740	10,655
4 Seattle University Community	19,512	32,781
5 Seattle Uptown Queen Anne	4,951	16,525
6 Seattle Downtown	21,361	176,883
7 Seattle First Hill/Capitol Hill	33,447	36,220
MANUFACTURING/INDUSTRIAL CENTERS:		
8 Paine Field/Boeing	4,459	33,814
9 Ballard/Interbay	1,354	14,201

TABLE 1. EVERETT TO SEATTLE AVERAGE TRAVEL TIMES (MINUTES) – 2002**AM PEAK**

TO FROM	EVERETT CBD	LYNNWOOD CBD	SEATTLE NORTHGATE	SEATTLE UPTOWN	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	SEATTLE UNIVERSITY COMMUNITY
EVERETT CBD		34	54	–	60	–	–	50
LYNNWOOD CBD	34		40/17	81	62/24	85	81	70/34
SEATTLE NORTHGATE	54	39/17		33	12	27	34	17
SEATTLE UPTOWN	–	108	34		8	11	27	23
SEATTLE CBD	60	96/24	20	8		8	14	18
SEATTLE CAPITOL HILL	–	103	38	8	12		8	20
SEATTLE FIRST HILL	–	102	40	17	11	7		22
SEATTLE UNIVERSITY COMMUNITY	–	79	15	24	13	20	24	

PM PEAK

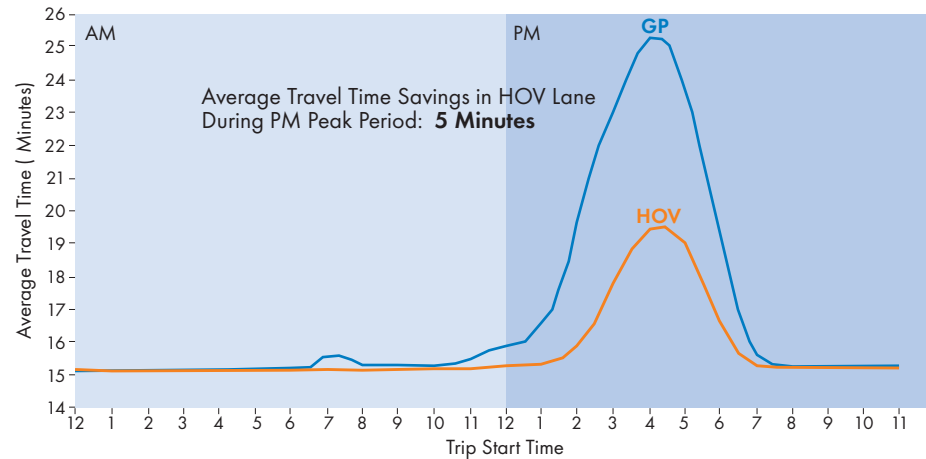
TO FROM	EVERETT CBD	LYNNWOOD CBD	SEATTLE NORTHGATE	SEATTLE UPTOWN	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	SEATTLE UNIVERSITY COMMUNITY
EVERETT CBD		40	60	–	71	–	–	90
LYNNWOOD CBD	46		40/20	93	73/35	92	87	60/35
SEATTLE NORTHGATE	60	49/20		40	24	37	40	17
SEATTLE UPTOWN	–	105	32		9	8	28	25
SEATTLE CBD	71	74/35	17	9		12	7	18
SEATTLE CAPITOL HILL	–	112	28	10	15		10	21
SEATTLE FIRST HILL	–	83	29	20	10	7		32
SEATTLE UNIVERSITY COMMUNITY	–	77	16	23	22	22	32	

Note: Where two times noted, shortest indicates express route.

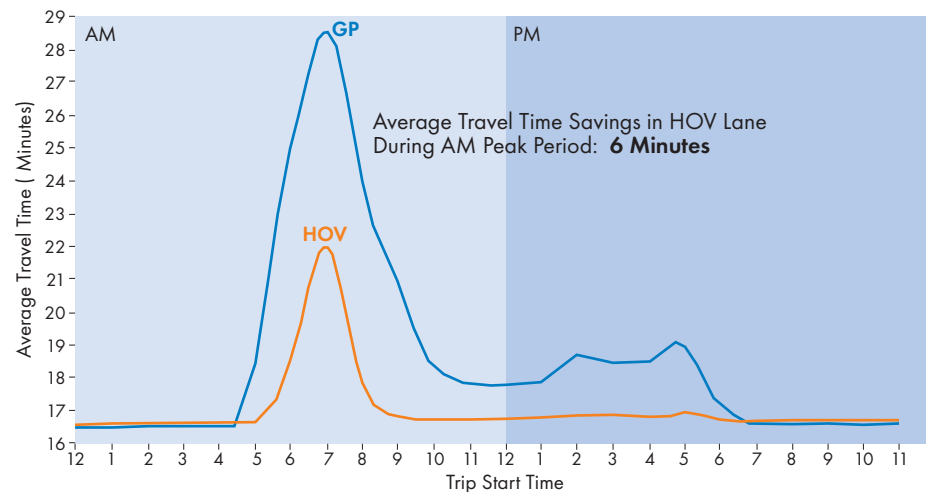
Source: Unless otherwise noted, data on this and subsequent tables throughout this chapter were received from each of the individual transit providers in the region. The data collection effort is part of developing a Congestion Management System (CMS) for the central Puget Sound region.

FIGURE 13. EVERETT TO SEATTLE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES – 2002

NORTHBOUND, NORTHGATE TO 112TH ST SW



SOUTHBOUND, SR 526 TO NORTHGATE



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 2. EVERETT TO SEATTLE PASSENGER TRIPS AND HEADWAYS – 2002

BETWEEN MCCOLLUM PARK-AND-RIDE LOT AND EVERETT MALL

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	210	1,908	19	79
Southbound	1,232	1,866	24	76

BETWEEN NE ROOSEVELT WAY/N 130TH ST AND NE 145TH ST

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	151	5,645	13	226
Southbound	4,935	5,437	171	215

BETWEEN SR 520 AND EASTLAKE AVENUE/UNIVERSITY BRIDGE

DIRECTION	PASSENGER TRIPS AM PEAK HOURS	PASSENGER TRIPS AVERAGE PER DAY	NUMBER OF BUSES AM PEAK HOURS	NUMBER OF BUSES AVERAGE PER DAY
Northbound	1,050	3,522	65	166
Southbound	862	2,448	20	139

TABLE 3. EVERETT TO SEATTLE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES – 2002

LOCATION	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
NW King County	Green Lake	446	95	48, 64, 66, 67, 73, 76, 79, 242, 316	Yes - 20 lockers
NW King County	Northgate Garage	423	85	41, 66, 67, 242	None
NW King County	Northgate Transit Center	296	98	5, 16, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, ST: 555	Yes - 8 lockers
NW King County	Northgate Transit Center Extension 1	412	51	5, 16, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, ST: 555	Yes - 8 lockers
NW King County	Shoreline	400	75	301, 303, 342, 358, 373	Yes - racks
Snohomish County	Ash Way (also serves the I-405 N Corridor)	1,019	69	114, 115, 116, 118, 200, 201, 202, 413, 414, 810, 860, ST: 511, 530, 532, 535	Yes - lockers
Snohomish County	Eastmont (also serves the I-405 N Corridor)	389	69	ST: 510, 513, 530, 532, 535	Yes - lockers
Snohomish County	Edmonds	255	52	110, 404, 405, 406, 441, 810, 870, 871	Yes - lockers
Snohomish County	Lynnwood (also serves the I-405 N Corridor)	1,000	97	110, 112, 114, 115, 116, 118, 120, 121, 130, 200, 201, 202, 401, 402, 441, 810, 855, ST: 511, 530, 532, 535	Yes - lockers
Snohomish County	Mariner	667	96	100, 101, 102, 105, 106, 200, 201, 202, 410, 411, 414, 810, 860	Yes - lockers
Snohomish County	McCullum Park	409	79	102, 105, 106, 112, 414, 810, 812	Yes - lockers
Snohomish County	Mountlake Terrace	387	83	130, 408, 414, 810, 851, 871, M: 347	Yes - lockers
Snohomish County	Swamp Creek	410	30	112, 114, 115, 116, 415, 417, 880, 881	Yes - lockers

Note: M = King County Metro route. ST = Sound Transit route.

TACOMA TO SEATTLE (Via I-5)

The Tacoma to Seattle corridor connects downtown Tacoma and downtown Seattle via I-5, a distance of approximately 31 miles.

The corridor contains six Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Tacoma Downtown – 4.2%
- Federal Way – 2.3%
- SeaTac – 4.8%
- Tukwila – 3.6%
- Seattle First Hill/Capitol Hill – 16.8%
- Seattle Downtown – 35.6%

In addition, the corridor serves the Port of Tacoma, North Tukwila and Duwamish Manufacturing/Industrial Centers.

Pierce Transit, King County Metro, and Sound Transit provide service along this corridor. Pierce Transit serves the Commerce Street Transit Center in downtown Tacoma while King County Metro and Sound Transit operate through the Federal Way Transit Center. Pierce Transit serves one regionally significant park-and-ride lot while King County Metro serves five and Sound Transit serves four. Pierce Transit operates 8 routes serving centers within this corridor while King County Metro operates 24 and Sound Transit operates six. (For park-and-ride and transit center locations, see map 1, page 3.)

Except for a segment from just north of Federal Way to downtown Tacoma, this corridor contains continuous freeway HOV lanes open to traffic.

In 2000, 81,062 people and 33,889 households were located within ¼ mile of the I-5 facility, representing 3 percent of the population and 3 percent of the households in Pierce and King Counties.

241,393 jobs were located within ½ mile of the corridor, representing 17 percent of the total employment in Pierce and King Counties.

Data sources: U.S. Census Bureau, Pierce Transit, King County Metro, Sound Transit, WSDOT, PSRC.



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Seattle Uptown		
Queen Anne	4,951	16,525
2 Seattle Downtown	21,361	176,883
3 Seattle First Hill/ Capitol Hill	33,447	36,220
4 Tukwila	22	22,749
5 SeaTac	10,749	9,533
6 Federal Way	629	4,241
7 Tacoma Downtown	7,213	23,093
MANUFACTURING/INDUSTRIAL CENTERS:		
8 Duwamish	1,773	67,919
9 North Tukwila	324	11,881
10 Port of Tacoma	756	14,037

TABLE 4. TACOMA TO SEATTLE AVERAGE TRAVEL TIMES (MINUTES) – 2002**AM PEAK**

TO FROM	FEDERAL WAY CBD	SEATAC CBD	SEATTLE UPTOWN	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	TACOMA CBD	TUKWILA CBD
FEDERAL WAY CBD		29	58	42/79	66	69	31	60
SEATAC CBD	20		48	29/94	58	51	45	15
SEATTLE UPTOWN	65	44		8	11	27	–	57
SEATTLE CBD	51/83	30/96	8		8	14	59	33
SEATTLE CAPITOL HILL	93	72	8	12		8	–	55
SEATTLE FIRST HILL	105	74	17	11	7		–	57
TACOMA CBD	40	54	–	61	–	–		–
TUKWILA CBD	40	16	51	33	57	45	–	

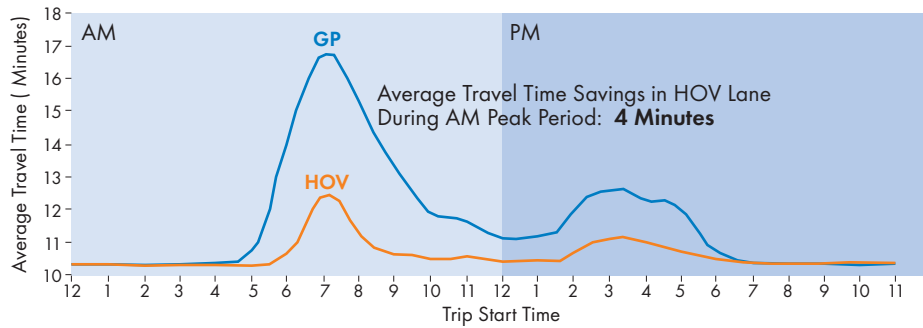
PM PEAK

TO FROM	FEDERAL WAY CBD	SEATAC CBD	SEATTLE UPTOWN	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	TACOMA CBD	TUKWILA CBD
FEDERAL WAY CBD		26/27	75	55/70	81	70	40	60
SEATAC CBD	28/24		49	29/94	50	51	55	16
SEATTLE UPTOWN	68	48		9	8	28	–	75
SEATTLE CBD	47/76	30/103	9		12	7	59	35
SEATTLE CAPITOL HILL	76	54	10	15		10	–	60
SEATTLE FIRST HILL	60	60	20	10	7		–	45
TACOMA CBD	38	56	–	60	–	–		–
TUKWILA CBD	64	21	81	34	56	58	–	

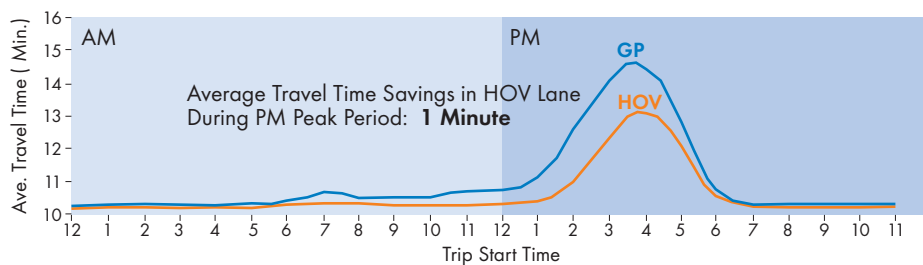
Note: Where two times noted, shortest indicates express route.

FIGURE 14. TACOMA TO SEATTLE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES — 2002

NORTHBOUND, S 184TH ST TO COLUMBIAN WAY (10.3 MILES)



SOUTHBOUND, S SPOKANE ST TO S 184TH ST (10.2 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 5. TACOMA TO SEATTLE PASSENGER TRIPS AND HEADWAYS — 2002

BETWEEN WEST SEATTLE BRIDGE AND I-90

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	1,875	2,077	55	67
Southbound	26	1,754	6	68

BETWEEN KENT-DES MOINES RD/SR 516 AND SEATAC AIRPORT/S 188TH ST

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	3,623	6,493	113	250
Southbound	204	5,186	14	250

BETWEEN PORTER WAY AND PORT OF TACOMA RD

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	930	2,802	22	117
Southbound	119	1,823	8	115

**TABLE 6. TACOMA TO SEATTLE PARK-AND-RIDE LOT CAPACITY,
UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES – 2002**

LOCATION	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
S. King County	Kent/ Des Moines	729	59	158, 159, 162, 166, 173, 175, 192, 194, 197, 941, 949, ST: 574	None
S. King County	Federal Way Transit Center	894	99	173, 174, 177, 181, 182, 183, 187, 194, 197, 901, 903, PT: 402, 500, 501 ST: 565, 574	Yes - 2 lockers
S. King County	South Federal Way	520	91	196, 903, 949	None
S. King County	Star Lake	549	83	152, 183, 190, 191, 192, 194, 197, 941, ST: 574	None
S. King County	Twin Lakes	612	10	179, 181, 197	None
Pierce County	Tacoma Dome Station Phase I	2,410	60	1, 11, 13, 41, 490, 500, 501, ST: 574, 582, 590, 591, 594	Yes

Note: PT = Pierce Transit route. ST = Sound Transit route.

BOTHELL TO BELLEVUE (Via I-405)

The Bothell to Bellevue corridor connects Bothell and downtown Bellevue via I-405, a distance of approximately 10 miles.

The corridor contains three Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Bothell Canyon Park – 1.3%
- Totem Lake – 1.7%
- Bellevue – 6.5%

In addition, connections leading from the corridor serve the Redmond Regional Growth Center, and the Overlake Manufacturing/Industrial Center.

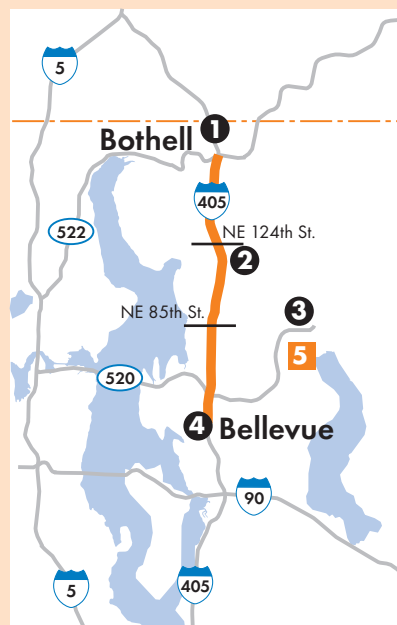
Community Transit, King County Metro, and Sound Transit provide service along this corridor. All three agencies operate through the Bellevue Transit Center in downtown Bellevue. Community Transit serves one regionally significant park-and-ride lot while King County Metro serves four and Sound Transit serves five. Community Transit operates six routes serving centers within this corridor while King County Metro operates 24 and Sound Transit operates five. (For park-and-ride and transit center locations, see map 1, page 3.)

The length of this corridor has freeway HOV lanes open to traffic.

In 2000, 27,908 people and 11,796 households were located within ¼ mile of the I-405 facility, representing 1 percent of the population and 1 percent of the households in Snohomish and King counties.

Over 57,000 jobs were located within ½ mile of the corridor, representing just over 4 percent of employment in Snohomish and King counties.

Data sources: U.S. Census Bureau, Community Transit, King County Metro, Sound Transit, WSDOT, PSRC.



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Bothell Canyon Park	3,037	6,532
2 Totem Lake	NA	NA
3 Redmond	2,271	5,797
4 Bellevue	2,588	31,725
MANUFACTURING/INDUSTRIAL CENTER:		
5 Overlake	414	19,286

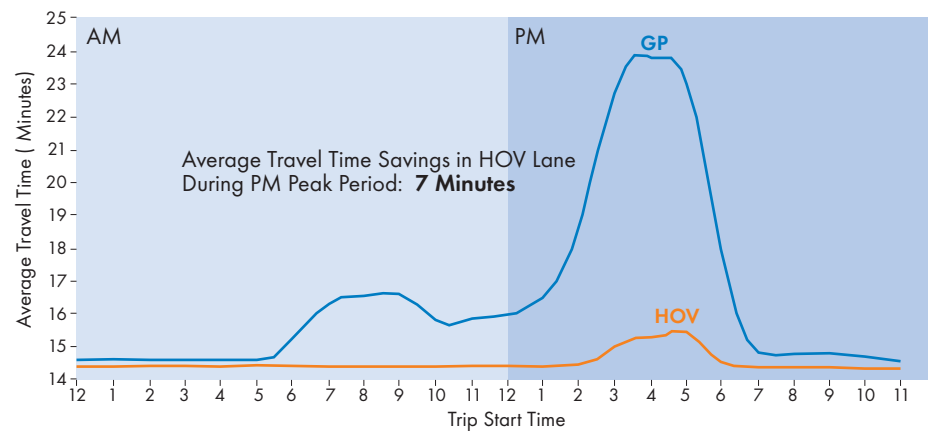
Note: Totem Lake not designated a Regional Growth Center until 2002.

TABLE 7. BOTHELL TO BELLEVUE AVERAGE TRAVEL TIMES (MINUTES) — 2002

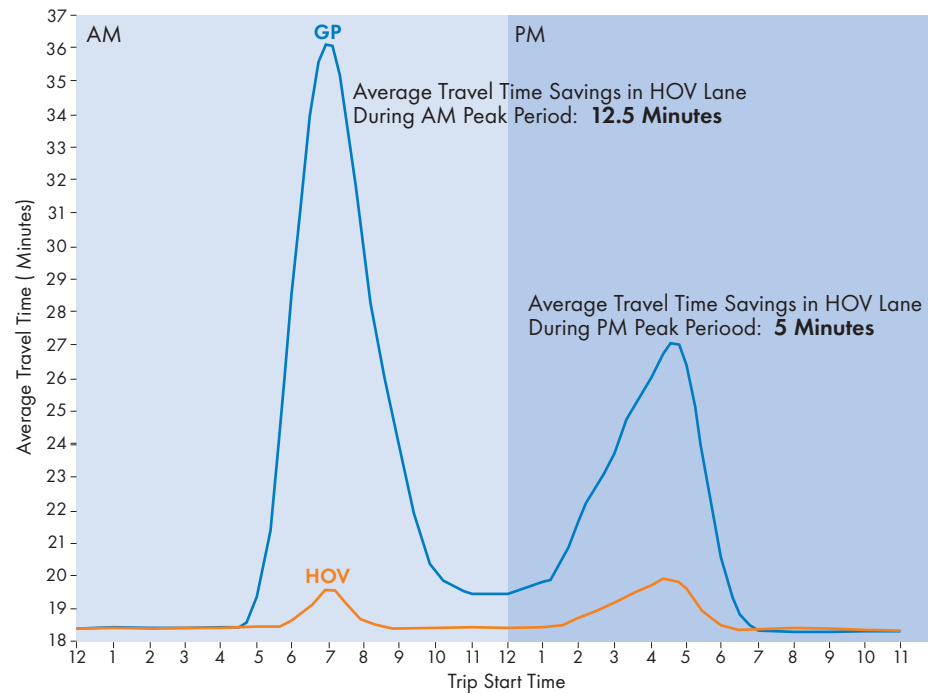
AM PEAK			PM PEAK		
FROM \ TO	BELLEVUE CBD	BOTHELL CANYON PARK	FROM \ TO	BELLEVUE CBD	BOTHELL CANYON PARK
BELLEVUE CBD		20	BELLEVUE CBD		22
BOTHELL CANYON PARK	20		BOTHELL CANYON PARK	22	

FIGURE 15. BOTHELL TO BELLEVUE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES — 2002

NORTHBOUND, I-90 INTERCHANGE TO 236TH ST SE (14.5 MILES)



SOUTHBOUND, SR 524 INTERCHANGE TO I-90 INTERCHANGE (14.8 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 8. BOTHELL TO BELLEVUE PASSENGER TRIPS AND HEADWAYS – 2002**BETWEEN KIRKLAND/NE 85TH ST AND TOTEM LAKE/NE 124TH ST**

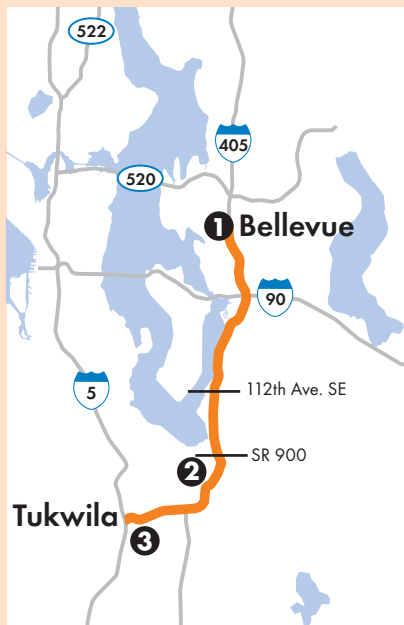
DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	108	1501	12	81
Southbound	1063	1590	39	81

TABLE 9. BOTHELL TO BELLEVUE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES – 2002

LOCATION	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
Snohomish	Canyon Park (also serves the I-5 N. corridor)	298	95	105, 106, 120, 121, 435, 441; ST: 530, 532, 535	Yes - lockers
E. King County	Woodinville	459	48	236, 237, 251, 311, 372; ST: 522	Yes - 4 lockers
E. King County	Houghton	450	54	237, 245, 251, 252, 254, 257, 260, 265, 277, 342, 952, 986, 997; ST: 530, 535	None
E. King County	Kingsgate	502	68	230, 237, 238, 252, 255, 257, 277, 291, 342, 935, 952; ST: 530, 532, 535	Yes - 4 lockers
E. King County	South Kirkland (also serves the SR 520 Corridor)	603	87	220, 230, 234, 255, 256, 986; ST: 540	Yes - 4 lockers in addition to racks

Note: ST = Sound Transit route.

Tukwila to Bellevue (Via I-405)



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Bellevue	2,588	31,725
2 Renton	1,788	17,184
3 Tukwila	22	22,749

TUKWILA TO BELLEVUE (Via I-405)

The Tukwila to Bellevue corridor connects Tukwila and downtown Bellevue via I-405 a distance of approximately 14 miles.

The corridor contains three Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Tukwila – 3.6%
- Renton – 3.6%
- Bellevue – 6.5%

King County Metro and Sound Transit provide service along this corridor, operating through the Bellevue Transit Center and the Renton Transit Center. King County Metro serves three regionally significant park-and-ride lots while Sound Transit serves one. King County Metro operates 19 routes serving centers within this corridor while Sound Transit operates one. (For park-and-ride and transit center locations, see map 1, page 3.)

The length of this corridor has continuous freeway HOV lanes open to traffic.

In 2000, 29,782 people and 14,025 households were located within ¼ mile of the I-405 facility, representing 2 percent of the population and 2 percent of the households in King county.

Over 84,000 jobs are located within ½ mile of the corridor, representing just over 6 percent of King County employment.

Data sources: U.S. Census Bureau, King County Metro, Sound Transit, WSDOT, PSRC.

TABLE 10. TUKWILA TO BELLEVUE AVERAGE TRAVEL TIMES (MINUTES) – 2002

AM PEAK

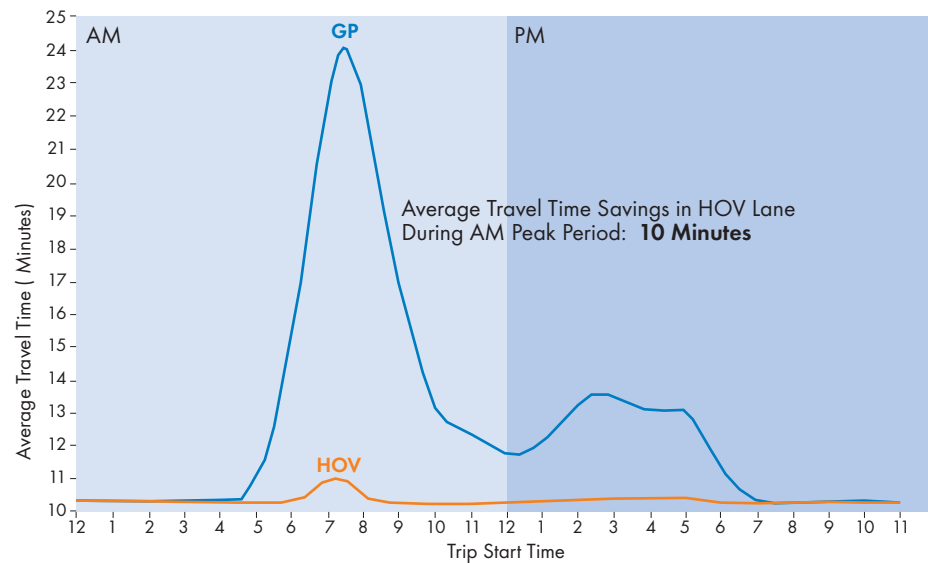
FROM \ TO	BELLEVUE CBD	RENTON CBD	TUKWILA CBD
BELLEVUE CBD		27	76
RENTON CBD	30		20
TUKWILA CBD	51	20	

PM PEAK

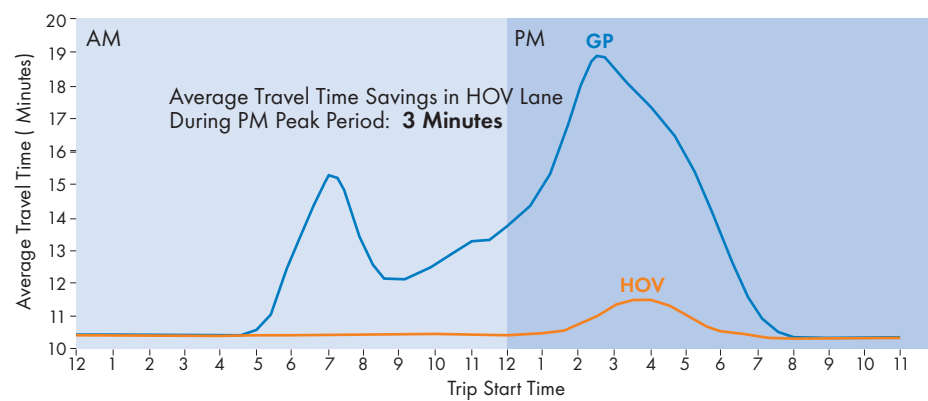
FROM \ TO	BELLEVUE CBD	RENTON CBD	TUKWILA CBD
BELLEVUE CBD		25	49
RENTON CBD	28		21
TUKWILA CBD	65	22	

FIGURE 16. TUKWILA TO BELLEVUE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES – 2002

NORTHBOUND, W VALLEY HWY TO I-90 INTERCHANGE (10.3 MILES)



SOUTHBOUND, I-90 INTERCHANGE TO ANDOVER PARK E (10.5 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 11. TUKWILA TO BELLEVUE PASSENGER TRIPS AND HEADWAYS – 2002**BETWEEN SR 900/NE PARK DR AND 112TH AVENUE SE**

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	569	954	25	75
Southbound	107	952	17	79

TABLE 12. TUKWILA TO BELLEVUE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES – 2002

SUBAREA	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
E. King County	Newport Hills	292	65	111, 167, 219, 247, 280 (on request), 342, 925, 952; ST: 560	None
S. King County	South Renton (also serves the I-5S, and SR 167 Corridors)	370	102*	101, 140, 148, 153, 167, 169, 240, 247, 280	Yes - 6 lockers
S. King County	Tukwila	307	93	150, 154, 160, 163, 280, 941	Yes - 2 lockers

* Indicates all stalls are occupied and vehicles are parking in areas that are not designated parking spaces.

Note: ST = Sound Transit route.

AUBURN TO RENTON (Via SR 167)

The Auburn to Renton corridor connects Auburn and Renton via SR-167, a distance of approximately 10 miles.

The corridor contains three Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Kent – 3%
- Renton – 3.6%
- Auburn – 2%

In addition, the corridor serves the Kent Manufacturing/Industrial Center.

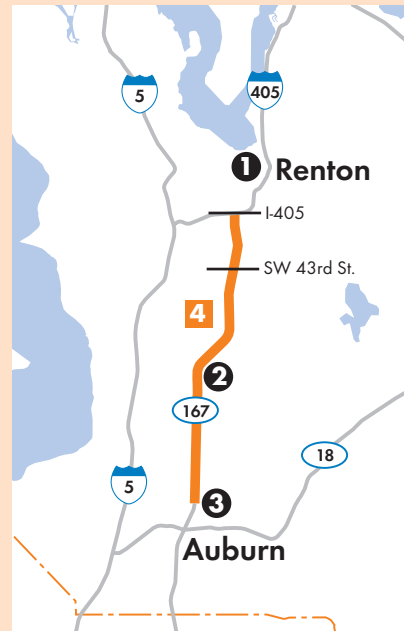
King County Metro and Sound Transit provide service along this corridor, operating through the Renton Transit Center, Kent Transit Center/Commuter Rail Station and Auburn Transit Center/Commuter Rail Station. King County Metro serves four regionally significant park-and-ride lots while Sound Transit serves three. King County Metro operates 23 routes serving centers within this corridor while Sound Transit operates three. (For park-and-ride and transit center locations, see map 1, page 3.)

The length of this corridor has continuous freeway HOV lanes open to traffic.

In 2000, 14,700 people and 6,230 households were located within ¼ mile of the SR-167 facility, representing 1 percent of the population and 1 percent of the households in King County.

Over 45,000 jobs were located within ½ mile of the corridor, representing over 3 percent of total employment in King County.

Data sources: U.S. Census Bureau, King County Metro, Sound Transit, WSDOT, PSRC.



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Renton	1,788	17,184
2 Kent	922	3,014
2 Auburn	NA	NA
MANUFACTURING/INDUSTRIAL CENTER:		
4 Kent	197	16,164

Note: Auburn not designated a Regional Growth Center until 2002.

Auburn to Renton (Via SR 167)

TABLE 13. AUBURN TO RENTON AVERAGE TRAVEL TIMES (MINUTES) – 2002

AM PEAK

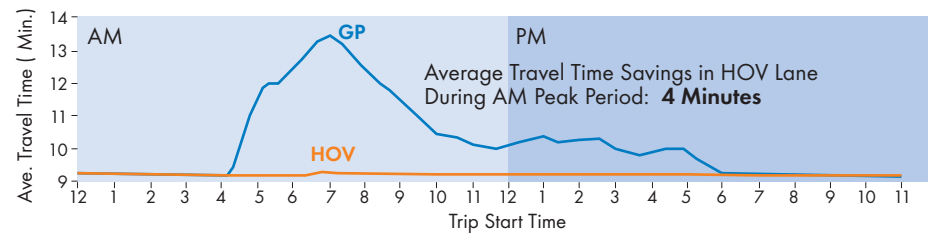
FROM \ TO	KENT CBD	RENTON CBD
KENT CBD		21
RENTON CBD	17	

PM PEAK

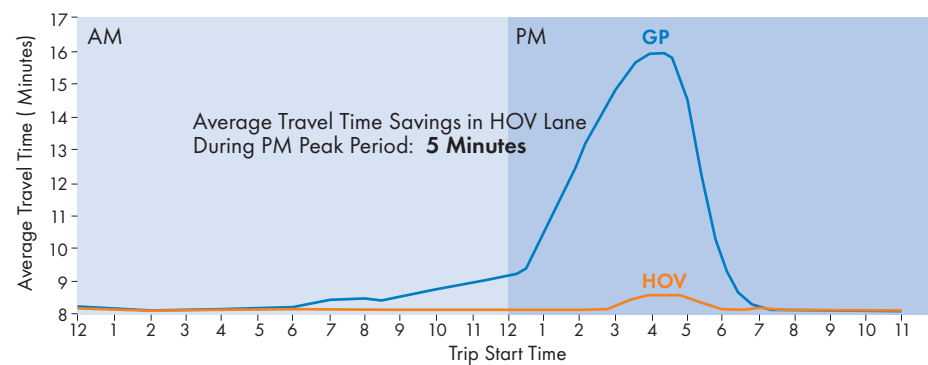
FROM \ TO	KENT CBD	RENTON CBD
KENT CBD		39
RENTON CBD	20	

FIGURE 17. AUBURN TO RENTON HOV AND GENERAL PURPOSE LANE TRAVEL TIMES – 2002

NORTHBOUND, 15TH ST NW TO S 34TH ST (9.2 MILES)



SOUTHBOUND, S 23RD ST TO 43RD ST NW (8.2 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 14. AUBURN TO RENTON PASSENGER TRIPS AND HEADWAYS – 2002

BETWEEN SW 43RD ST AND I-405

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	77	207	5	17
Southbound	21	208	3	18

TABLE 15. AUBURN TO RENTON PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES – 2002

SUBAREA	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
S. King County	Kent Transit Center	729	59	150, 153, 154, 158, 159, 162, 164, 166, 167, 168, 169, 183, 914, 916, 952; ST: 564, 565	Yes - 4 lockers
S. King County	Kent Garage/Commuter Rail Station	288	19	150, 153, 158, 159, 164, 166, 167, 168, 169, 918; ST: 564, 565 Sounder Commuter Rail	None
S. King County	Auburn Transit Center/Commuter Rail Station	365	33	150, 151, 152, 154, 181, 185, 186, 915, 917; ST: 564, 565, 585 Sounder Commuter Rail	None
S. King County	Auburn	367	81	150, 152, 154, 167, 185, 952	Yes - 4 lockers

Note: ST = Sound Transit route.

Issaquah to Seattle (Via I-90)



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Seattle Uptown		
Queen Anne	4,951	16,525
2 Seattle Downtown	21,361	176,883
3 Seattle First Hill/ Capitol Hill	33,447	36,220
MANUFACTURING/INDUSTRIAL CENTER:		
4 Duwamish	1,773	67,919

ISSAQUAH TO SEATTLE (Via I-90)

The Issaquah to Seattle corridor connects Issaquah and downtown Seattle via I-90, a distance of approximately 15 miles.

The corridor contains two Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Seattle First Hill/Capitol Hill – 16.8%
- Seattle Downtown – 35.6%

In addition, the corridor serves the Duwamish Manufacturing/Industrial Center.

King County Metro and Sound Transit provide service along this corridor, operating through the transit tunnel in downtown Seattle. King County Metro and Sound Transit each serve three regionally significant park-and-ride lots. King County Metro operates 30 routes serving centers within this corridor while Sound Transit operates three. There is no center-to-center travel time data for this corridor because Issaquah is not designated a regional growth center. (For park-and-ride and transit center locations, see map 1, page 3.)

The length of this corridor has HOV lanes open to traffic (reversible on the bridge deck).

In 2000, 32,201 people and 13,671 households were located within ¼ mile of this corridor, representing 2 percent of the population and 2 percent of the households in King County.

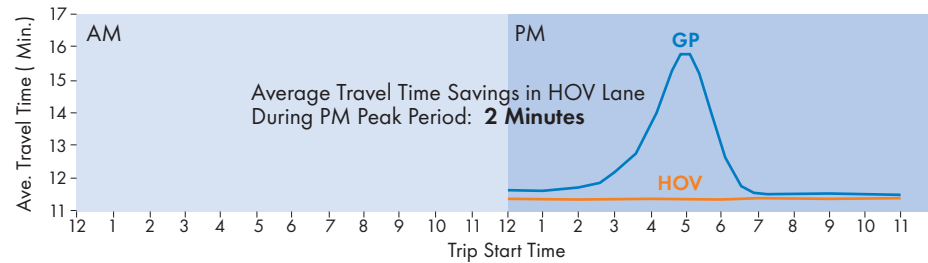
Over 57,000 jobs were located within ½ mile of the corridor, representing just over 4 percent of total employment in King County.

Data sources: U.S. Census Bureau, King County Metro, Sound Transit, WSDOT, PSRC.

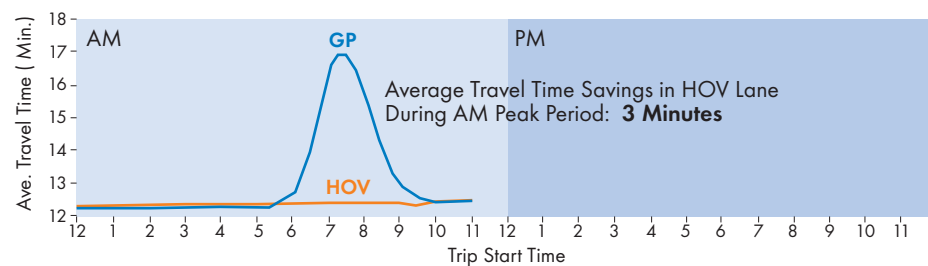
Note: Percentages rounded to the nearest tenth.

FIGURE 18. ISSAQUAH TO SEATTLE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES — 2002

EASTBOUND, MT. BAKER TUNNEL TO 193RD PL SE (11.3 MILES)



WESTBOUND, SR 900 TO 23RD AVE S (12.4 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 16. ISSAQUAH TO SEATTLE PASSENGER TRIPS AND HEADWAYS — 2002

BETWEEN LAKEMONT BLVD SE AND SR 900

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Westbound	396	969	29	69
Eastbound	175	1284	15	69

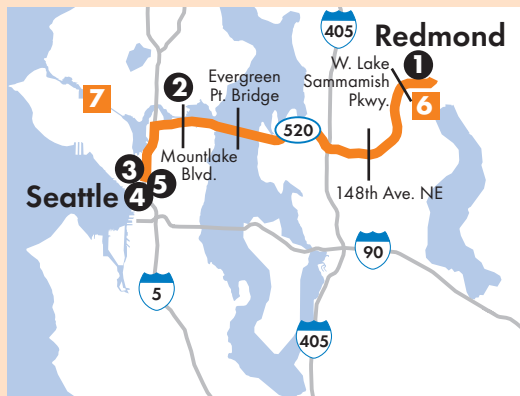
TABLE 17. ISSAQUAH TO SEATTLE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES — 2002

SUBAREA	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
E. King County	Mercer Island	257	104*	201, 202, 203, 204, 205, 213, 216, 892, 942, 989, 998; ST: 550, 554	Yes - 4 lockers in addition to racks
E. King County	Eastgate	724	96	212, 217, 222, 225, 229, 245, 247, 271, 272, 888, 890, 921, 926, 942, 989, 998; ST: 554, 555	Yes - 4 lockers in addition to racks
E. King County	Issaquah	394	106*	200, 209, 210, 214, 269, 271, 927 DART, 998; ST: 554, 555	Yes - 4 lockers in addition to racks

* Indicates all stalls are occupied and vehicles are parking in areas that are not designated parking spaces.

Note: ST = Sound Transit route.

Redmond to Seattle (Via SR 520)



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Redmond	2,271	5,797
2 Seattle University Community	19,512	32,781
3 Seattle Uptown Queen Anne	4,951	16,525
4 Seattle Downtown	21,361	176,883
5 Seattle First Hill/Capitol Hill	33,447	36,220
MANUFACTURING/INDUSTRIAL CENTER:		
6 Overlake	414	19,286
7 Ballard-Interbay	1,354	14,201

REDMOND TO SEATTLE (Via SR 520)

The Redmond to Seattle corridor connects Redmond and downtown Seattle via SR 520, a distance of approximately 15 miles.

The corridor contains five Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Redmond – 1.9%
- Seattle University Community – 22.3%
- Seattle First Hill/Capitol Hill – 16.8%
- Seattle Downtown – 35.6%
- Seattle Uptown – 11.9%

In addition, the corridor serves the Redmond Overlake Manufacturing/Industrial Center. King County Metro and Sound Transit provide service along this corridor, operating through the transit tunnel in downtown Seattle and the Overlake Transit Center.

King County Metro and Sound Transit serve two regionally significant park-and-ride lots. King County Metro operates 16 routes serving centers within this corridor while Sound Transit operates two. (For park-and-ride and transit center locations, see map 1, page 3.)

Much of this corridor does not include continuous freeway HOV lanes.

In 2000, 48,994 people and 26,983 households were located within ¼ mile of this corridor, representing 3 percent of the population and 4 percent of the households in King County.

Over 192,000 jobs were located within ½ mile of the corridor, representing 14 percent of total employment in King County.

Data sources: U.S. Census Bureau, King County Metro, Sound Transit, WSDOT, PSRC.

Note: Percentages rounded to the nearest tenth.

TABLE 18. REDMOND TO SEATTLE AVERAGE TRAVEL TIMES (MINUTES) – 2002

AM PEAK

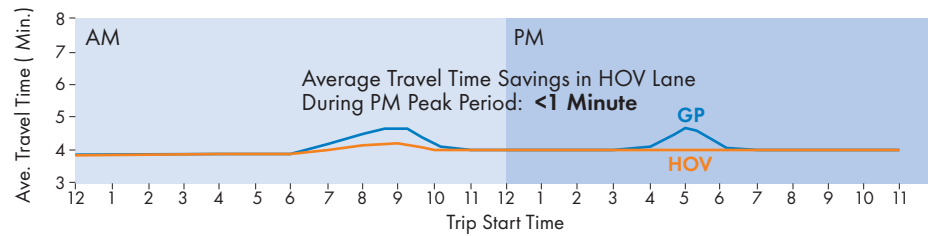
TO FROM	REDMOND CBD	SEATTLE UPTOWN	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	SEATTLE UNIVERSITY COMMUNITY
REDMOND CBD		54	32	49	49	40
SEATTLE UPTOWN	58		8	11	27	23
SEATTLE CBD	41	8		8	14	18
SEATTLE CAPITOL HILL	56	8	12		8	20
SEATTLE FIRST HILL	58	17	11	7		22
SEATTLE UNIVERSITY COMMUNITY	57	24	13	20	24	

PM PEAK

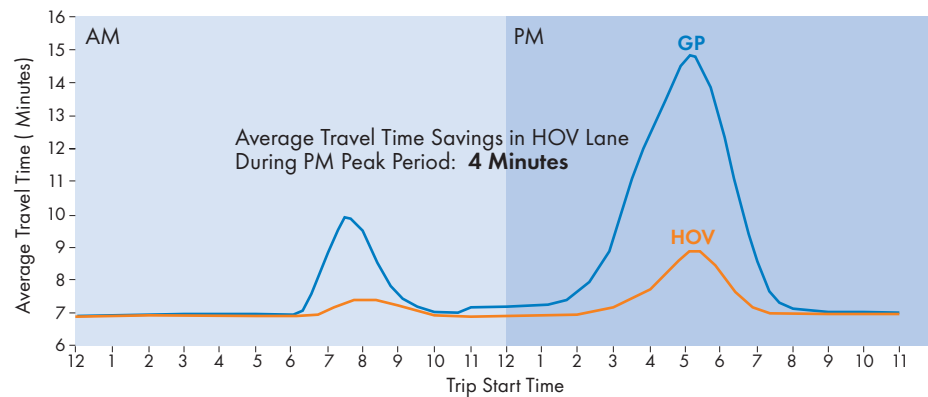
TO FROM	REDMOND CBD	SEATTLE UPTOWN	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	SEATTLE UNIVERSITY COMMUNITY
REDMOND CBD		63	49	64	77	56
SEATTLE UPTOWN	55		9	8	28	25
SEATTLE CBD	45	9		12	7	18
SEATTLE CAPITOL HILL	55	10	15		10	21
SEATTLE FIRST HILL	55	20	10	7		32
SEATTLE UNIVERSITY COMMUNITY	46	23	22	22	32	

FIGURE 19. REDMOND TO SEATTLE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES — 2002

EASTBOUND, I-405 INTERCHANGE TO NE 51ST ST (3.9 MILES)



WESTBOUND, W LAKE SAMMAMISH PKWY TO 84TH AVE (7.0 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 19. REDMOND TO SEATTLE PASSENGER TRIPS AND HEADWAYS — 2002

BETWEEN MONTLAKE BLVD NE AND EVERGREEN POINT BRIDGE/SR 520

DIRECTION	PASSENGER TRIPS (AM. PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM. PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Westbound	2960	5511	122	142
Eastbound	936	5337	52	275

BETWEEN 148TH AVENUE NE AND W LAKE SAMMAMISH PARKWAY

DIRECTION	PASSENGER TRIPS (AM. PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM. PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	336	1262	18	70
Southbound	505	874	23	66

TABLE 20. REDMOND TO SEATTLE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES AND BICYCLE AMENITIES — 2002

SUBAREA	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
E. King County	Bear Creek	334	49	216, 233, 251, 253, 266, 268, 269, 922, 929; ST: 540, 545	None
E. King County	Redmond	344	93	220, 230, 232, 249, 250, 251, 253, 254, 265, 266, 291, 922, 929, 997; ST: 540, 545	Yes – 4 lockers in addition to racks

Note: ST = Sound Transit route.

BELLEVUE TO SEATTLE (Via I-90)

The Bellevue to Seattle corridor connects downtown Bellevue and downtown Seattle, via I-90, a distance of approximately 11 miles.

The corridor contains three Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Bellevue – 6.5%
- Seattle First Hill/Capitol Hill – 16.8%
- Seattle Downtown – 35.6%

In addition the corridor serves the Duwamish Manufacturing/Industrial Center.

King County Metro and Sound Transit provide service along this corridor, operating through the transit tunnel in downtown Seattle and the downtown Bellevue Transit Center. King County Metro and Sound Transit serve two regionally significant park-and-ride lots. King County operates 13 routes serving centers within this corridor while Sound Transit operates three. (For park-and-ride and transit center locations, see map 1, page 3.)

The length of this corridor has continuous freeway HOV lanes (reversible lanes on bridge deck) open to traffic.

In 2000, 39,768 people and 18,633 households were located within ¼ mile of this corridor, representing 2 percent of the population and 2 percent of the households in King County

Nearly 229,000 jobs were located within ½ mile of the corridor, representing 17 percent of total employment in King County.

Data sources: U.S. Census Bureau, King County Metro, Sound Transit, WSDOT, PSRC.



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Seattle Uptown Queen Anne	4,951	16,525
2 Seattle Downtown	21,361	176,883
3 Seattle First Hill/ Capitol Hill	33,447	36,220
4 Bellevue	2,588	31,725
MANUFACTURING/INDUSTRIAL CENTER:		
5 Duwamish	1,773	67,919

TABLE 21. BELLEVUE TO SEATTLE AVERAGE TRAVEL TIMES (MINUTES) – 2002**AM PEAK**

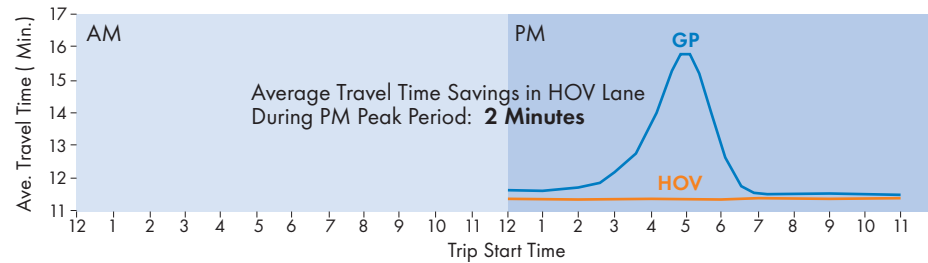
TO FROM	BELLEVUE CBD	SEATTLE UPTOWN QUEEN ANNE	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	SEATTLE UNIVERSITY COMMUNITY
BELLEVUE CBD		54	32	47	52	24
SEATTLE UPTOWN QUEEN ANNE	49		8	11	27	23
SEATTLE CBD	29	8		8	14	18
SEATTLE CAPITOL HILL	47	8	12		8	20
SEATTLE FIRST HILL	49	17	11	7		22
SEATTLE UNIVERSITY COMMUNITY	30	24	13	20	24	

AM PEAK

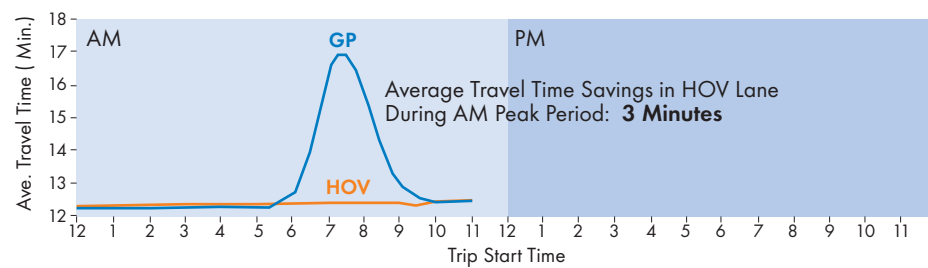
TO FROM	BELLEVUE CBD	SEATTLE UPTOWN QUEEN ANNE	SEATTLE CBD	SEATTLE CAPITOL HILL	SEATTLE FIRST HILL	SEATTLE UNIVERSITY COMMUNITY
BELLEVUE CBD		49	31	55	42	25
SEATTLE UPTOWN QUEEN ANNE	46		9	8	28	25
SEATTLE CBD	32	9		12	7	18
SEATTLE CAPITOL HILL	48	10	15		10	21
SEATTLE FIRST HILL	56	20	10	7		32
SEATTLE UNIVERSITY COMMUNITY	30	23	22	22	32	

FIGURE 20. BELLEVUE TO SEATTLE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES – 2002

EASTBOUND, MT. BAKER TUNNEL TO 193RD PL SE (11.3 MILES)



WESTBOUND, SR 900 TO 23RD AVE S (12.4 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 22. BELLEVUE TO SEATTLE PASSENGER TRIPS AND HEADWAYS – 2002

BETWEEN BELLEVUE WAY AND I-405

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Westbound	1575	2378	65	147
Eastbound	210	2443	22	149

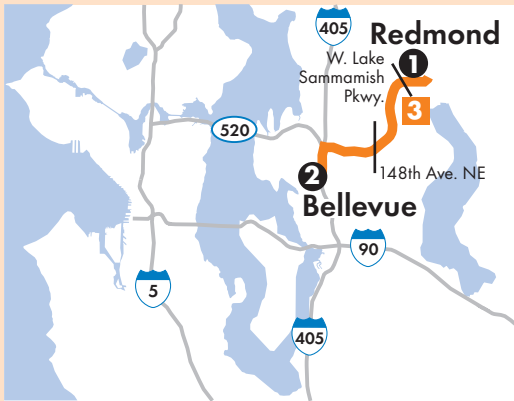
TABLE 23. BELLEVUE TO SEATTLE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES – 2002

SUBAREA	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
E. King County	Mercer Island	257	102*	201, 202, 203, 204, 205, 213, 216, 892, 942, 989, 998; ST: 550, 554	Yes - 4 lockers in addition to racks
E. King County	S. Bellevue	524	102*	222, 240, 942; ST: 550, 560	Yes - racks

* Indicates all stalls are occupied and vehicles are parking in areas that are not designated parking spaces.

Note: ST = Sound Transit route.

Redmond to Bellevue (Via SR 520)



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Redmond	2,271	5,797
2 Bellevue	2,588	31,725
MANUFACTURING/INDUSTRIAL CENTER:		
3 Overlake	414	19,286

REDMOND TO BELLEVUE (Via SR 520)

The Redmond to Bellevue corridor connects downtown Redmond and downtown Bellevue, a distance of approximately 7 miles.

The corridor contains two Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Redmond – 1.9%
- Bellevue – 6.5%

In addition, the corridor provides a link to the Overlake Manufacturing /Industrial Center.

King County Metro and Sound Transit provide service along this corridor, operating through the downtown Bellevue and Overlake Transit Centers. King County Metro and Sound Transit each serve two regionally significant park-and-ride lots. King County Metro operates 18 routes serving centers within this corridor while Sound Transit operates two. (For park-and-ride and transit center locations, see map 1, page 3.)

The length of this corridor has HOV lanes open to traffic.

In 2000, 15,888 people and 7,030 households were located within ¼ mile of this corridor, representing 1 percent of the population and 1 percent of the households in King County.

Nearly 92,000 jobs were located within ½ mile of the corridor, representing 7 percent of King County employment.

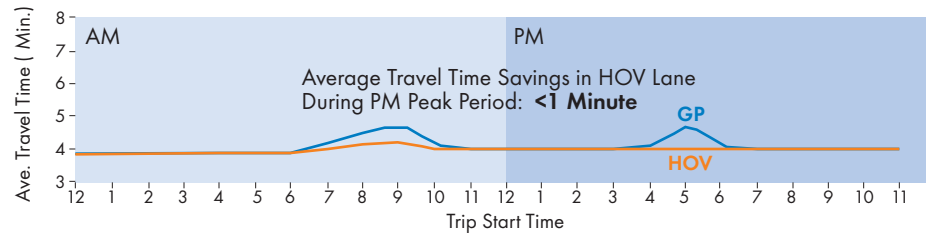
Data sources: U.S. Census Bureau, King County Metro, Sound Transit, WSDOT, PSRC.

TABLE 24. REDMOND TO BELLEVUE AVERAGE TRAVEL TIMES (MINUTES) – 2002

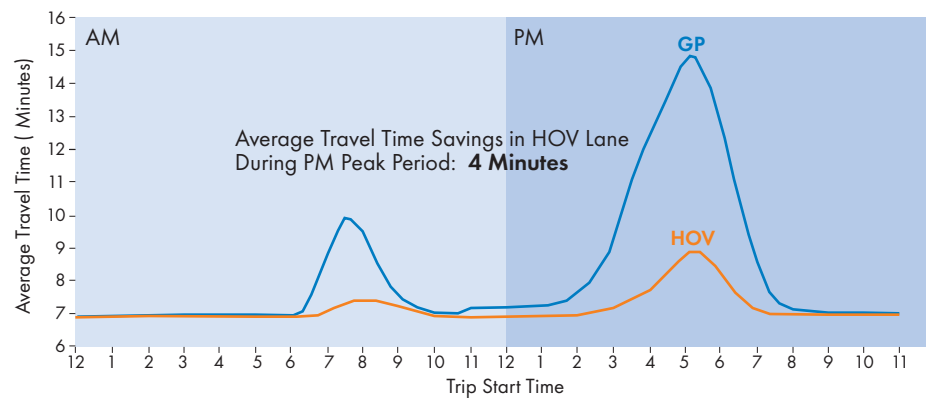
AM PEAK			PM PEAK		
FROM \ TO	Bellevue CBD	Redmond CBD	FROM \ TO	Bellevue CBD	Redmond CBD
Bellevue CBD		21			21
Redmond CBD	35			30	

FIGURE 21. REDMOND TO BELLEVUE HOV AND GENERAL PURPOSE LANE TRAVEL TIMES – 2002

EASTBOUND, I-405 INTERCHANGE TO NE 51ST ST (3.9 MILES)



WESTBOUND, W LAKE SAMMAMISH PKWY TO 84TH AVE (7.0 MILES)



Source: HOV Lane Performance Monitoring: 2002 Report.

TABLE 25. REDMOND TO BELLEVUE PASSENGER TRIPS AND HEADWAYS – 2002

BETWEEN 148TH AVENUE NE AND W LAKE SAMMAMISH PARKWAY

DIRECTION	PASSENGER TRIPS (AM PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	336	1262	18	70
Southbound	505	874	23	66

TABLE 26. REDMOND TO BELLEUVE PARK-AND-RIDE LOT CAPACITY, UTILIZATION RATE, BUS ROUTES, AND BICYCLE AMENITIES — 2002

SUBAREA	NAME	NO. OF STALLS	UTILIZ. RATE (%)	ROUTES SERVED	BICYCLE AMENITIES
E. King County	Bear Creek	334	49	216, 233, 251, 253, 266, 268, 269, 922, 929; ST: 540, 545	None
E. King County	Redmond	344	93	220, 230, 232, 249, 250, 251, 253, 254, 265, 266, 291, 922, 929, 997; ST: 540, 545	Yes - 4 lockers in addition to racks

Note: ST = Sound Transit routes.

BREMERTON TO SILVERDALE (Via SR 3)

The Bremerton to Silverdale Corridor connects downtown Bremerton and Silverdale, a distance of approximately 9 miles.

The corridor contains two Regional Growth Centers. Below is a list of these centers and the year 2000 share of total commute trips on public transportation:

- Bremerton – 5.7%
- Silverdale – 1.4%

Kitsap Transit provides service along this corridor, operating through the Bremerton Transportation Center located at the Washington State ferry terminal in downtown Bremerton. Kitsap Transit operates 18 routes within this corridor. There is no center-to-center travel time data for this corridor as Silverdale was not designated a regional growth center until 2004. (For park-and-ride and transit center locations, see map 1, page 3.)

SR 3 does not have HOV lanes.

In 2000, 15,954 people and 6,047 households were located within ¼ mile of the SR3 facility, representing 7 percent of the population and 7 percent of the households in Kitsap County.

Nearly 10,066 jobs were located within ½ mile of the corridor, representing 14 percent of Kitsap County employment.

Data sources: U.S. Census Bureau, Kitsap Transit, WSDOT, PSRC.



	2000 POPULATION	2000 EMPLOYMENT
REGIONAL GROWTH CENTERS:		
1 Silverdale	NA	NA
2 Bremerton	9,454	15,855
MANUFACTURING/INDUSTRIAL CENTER:		
5 South Kitsap Industrial Center	NA	NA

Note: Silverdale not designated a Regional Growth Center and South Kitsap Industrial Center not designated a Manufacturing/Industrial Center until 2005.

TABLE 27. BREMERTON TO SILVERDALE PASSENGER TRIPS AND HEADWAYS – 2002

BETWEEN KITSAP WAY/SR 310 AND NW NEWBERRY HILL ROAD

DIRECTION	PASSENGER TRIPS (AM. PEAK HOURS)	PASSENGER TRIPS (AVERAGE PER DAY)	NUMBER OF BUSES (AM. PEAK HOURS)	NUMBER OF BUSES (AVERAGE PER DAY)
Northbound	20	250	2	19
Southbound	135	250	4	18

TABLE 28. BREMERTON TO SILVERDALE BUS ROUTES AND BICYCLE AMENITIES – 2002

ROUTES SERVED	BICYCLE AMENITIES
11, 12, 13, 14, 15, 17, 20, 21, 22, 24, 25, 26, 27, 28, 29, 32, 33, 34	Yes – lockers at the Bremerton Ferry Terminal

Initial Assessment of Regionwide Trends and Direction for Future Work

Policy direction for monitoring regional transportation planning comes from the multicounty planning policies adopted in 1995, as required under the Washington State Growth Management Act (GMA). Both VISION 2020 (adopted in 1995) and *Destination 2030* (adopted in 2001) are built upon this policy direction. Chapter 1 contains a summary of regional policy direction for public transportation. There is inadequate data in this report to fully evaluate progress toward stated regional policy direction adopted in 1995. However, some preliminary trends can be identified based on regionwide data reported between 1990 and 2000. This chapter includes a discussion of these trends and outlines potential policy implications that can be more fully evaluated in future reports. Subsequent reports will include sufficient data for future years that can be compared to the baseline data to make critical judgments regarding the region's progress toward achieving regional objectives.

INITIAL ASSESSMENT OF REGIONWIDE TRENDS

Below is an initial assessment of transit system performance and development based on the regionwide data between 1990 and 2000. The assessment is organized in the following categories based on regional transportation policy direction.

1. *Supply* — Expand the supply of transit services and facilities to support land use and travel demand.
2. *Use* — Increase ridership throughout the region and in major corridors.
3. *Efficiency* — Operate transit services and facilities efficiently and cost-effectively.
4. *Quality* — Improve the convenience and reliability of transit services regionwide.
5. *Access* — Facilitate access to transit services for all travel modes.

1. *Supply* — Expand the supply of transit services and facilities to support land use

Policy direction for expanding the supply of transit services calls for completing the freeway HOV lane network, establishing a system of regional high capacity transit services, building an intermediate capacity transit system within the city of Seattle, operating regional express bus routes between regional centers, adding new local fixed route bus and demand responsive transit services, and investing in major capital facilities that will support existing and new transit services. Plan direction describes a transit network that provides high capacity connections between the regionally designated growth centers while recognizing that adequate links should also be provided to and within surrounding communities. Priority is placed on providing high capacity transit services along congested corridors and locating stations within regional growth centers.

Initial Assessment

On a regionwide basis, local and regional transit providers have made advances toward constructing the facilities and providing services envisioned in VISION 2020 and described in detail in *Destination 2030*. Much of the planned core high occupancy vehicle lane system is in operation, a number of high capacity transit services are in place or under construction, and many planned capital facilities have been completed. There has been expansion in both local and regional express bus routes and in the size of transit vehicle fleets. In addition, transit agencies have developed a wide variety of other methods to help attract new riders, including marketing programs, fare innovations such as the U-Pass, rider information such as web-based trip planning, route restructuring, and the introduction of more specialized services. More needs to be done, but progress was made between 1990 and 2000 toward building the supply of transit facilities and services needed to achieve stated regional policy direction.

Other observations include:

- **Investments reflect a commitment to centers.** Throughout the region, transit riders have access to an array of services and facilities, much of it developed between 1990 and 2000. The focus of these investments has been to strengthen services along major regional corridors that link regional growth centers, consistent with regional policy.
- **Facilities provide convenient intermodal connections.** All of the corridors analyzed currently include transit centers and/or park-and-ride lots that generally provide convenient and attractive transfer opportunities to and between regional express and local bus routes. Many of these lots are served by more than one transit agency.
- **Regional express bus service is focused in major corridors.** Regional express bus service is currently operating in all but one of the corridors analyzed, with many of the regional growth centers served by multiple routes. Levels of service vary among corridors, with the most frequent service oriented to the peak directions during periods.
- **Investments reflect a commitment to efficient and reliable service.** The substantially complete regional HOV lane network improves transit reliability and operations along major corridors linking regional growth centers. Planned and newly constructed HOV direct access ramps facilitate productive routes and optimize delivery of local service.

Policy Implications

Destination 2030 calls for the establishment of goals reflecting regional policy intent to achieve increased proportional travel by transit to achieve reduced dependence on single occupant vehicle travel, with the greatest proportional increases in regional growth centers. Policy direction should be developed that provides guidance for developing these goals, including specific targets that can be monitored over time.

2. Use — Increase ridership throughout the region and in major corridors.

Policies for increased use of transit call for a greater share of regional travel to be made by transit and high occupancy vehicles in order to achieve reduced dependence on single occupant vehicle travel. Travel demand forecasts conducted for *Destination 2030* show a nearly threefold increase in transit ridership by 2030. The highest proportional increases in transit ridership are expected to be on services providing connections to and within regional growth centers. Implicit in this direction is the need to maintain and improve transit ridership in existing markets and grow new transit markets over time. Specifically, policies promote a greater share of regional travel to be made by transit, high occupancy vehicles, and nonmotorized travel modes.

Initial Assessment

Since transit ridership reached an all-time low in the early 1970s, transit use in the Puget Sound region has increased steadily. In 2000, transit ridership exceeded previous historic highs, reaching 132 million transit passenger trips. This growth in transit ridership mirrored that of ridership growth throughout the country — significant declines between 1940 -1970 and steady increases between 1970-2000. Not only is transit ridership up in the region, but also a historic shift in overall travel trends emerged over the last decade. During the 1990s, transit ridership increased 35 percent while the number of total vehicle miles traveled grew by only 25 percent. In contrast, during the 1980s, transit trips were up 21 percent compared to a 75 percent increase in vehicle miles traveled. This reversal is due to a combination of increasing transit usage and a leveling off of vehicle miles traveled. See *Puget Sound Trends Report no. T-2* (October 2004) for a discussion on the growth in vehicle miles traveled during the 1980s and 1990s. Journey to work data shows that public transportation is capturing a respectable share of total commute trips especially in regional growth centers that are work destinations (e.g., Seattle, Bellevue, Bremerton and Tacoma), but in other centers, the vast majority of commuters chose to drive alone.

While more and better transit services and facilities have definitely had a positive influence on transit usage, other influences not under the control of transit agencies have had both positive and negative impacts. Transit providers have identified rapid population growth, substantial economic and employment growth, increasing parking costs, and worsening traffic congestion over the last decade as issues influencing the demand for transit services. On the other hand, according to transit providers, changes in travel and household structure, more dispersed land development patterns, historically low gas prices, and increased auto ownership have made it difficult to attract more transit riders.

Policy Implications

Destination 2030 calls for the promotion of demand management and education programs that shift travel demand to non-single occupant vehicle travel modes and to off-peak travel periods. Policies could provide more guidance on opportunities for increasing ridership for non-work related transit trips, possibly by providing incentives for travel outside of peak periods. More specific policy direction is also needed regarding transportation pricing strategies oriented toward reducing peak travel demands and for increasing access to major growth centers.

3. Efficiency — Operate transit services and facilities efficiently and cost-effectively.

There is direction throughout regional policy for providing public facilities and services in an efficient and cost-effective manner. Efficiency and effectiveness measures evaluate the ability of the region's transit agencies to provide services and meet demand for transit given limited financial resources. The financial viability of public transportation agencies is key to achieving associated regional goals and is an important part of the regional monitoring effort.

Initial Assessment

Congestion in major travel corridors, while providing a reason for some to use transit, has also caused serious problems for transit operations. As documented in *Destination 2030*, congestion in the region grew rapidly during the 1990s, constricting travel on many of the major freeways and arterials. Transit operators cite traffic congestion as a major reason for declining reliability and slowing bus speeds in certain corridors, causing longer operating schedules, requiring larger bus fleets, and increasing service costs. The costs of demand response services have placed increased financial demands on transit agencies. On average, a demand response trip costs approximately

\$23 to \$25 while fixed route service costs \$3 to \$5 per trip. Although demand responsive trips represent only 3 percent of all transit trips regionwide, nearly 15 percent of transit agency operating budgets goes to serving these trips.

Transit revenue in this region is particularly susceptible to economic conditions because transit agencies depend heavily on local sales tax revenue as their primary funding source. When sales are down, revenues decrease. The loss of revenue from the State motor vehicle excise tax (MVET) starting in 2000 heavily impacted public transit finances. MVET accounted for between 30 and 40 percent of the local transit agencies' operating budgets. Transit agencies had to tap into local reserves and got some state financial assistance that mitigated dramatic service reductions. Ultimately, each of the local transit operators passed county ballot-measures that increased local sales tax rates, bringing transit revenue sources generally back to pre-2000 levels.

Policy Implications

Regional policy direction calls for providing public facilities and services in an efficient and cost-effective manner. Changes in the environment within which transit operates (e.g., congestion) has affected transit agencies' ability to control operating costs. Increased priority for HOV investments and transit priority treatments can potentially address this issue. Increased demand for costly demand response services will likely place a further strain on transit's financial capacity. In addition, stabilizing transit agencies' operating revenues will facilitate better long range planning.

4. Quality — Improve the convenience and reliability of transit services regionwide.

Destination 2030 policies address the quality of transit services that should be provided to meet plan objectives. Specifically, policies call for greater frequency of services, increased reliability, and better transit travel times relative to single occupant vehicle travel. Policies state that travel time is an important characteristic of transit's ability to compete effectively with single occupant vehicle travel, and that speed, and therefore travel time for the user, is a key characteristic of competitive service. This direction can be used to craft important measures in evaluating the quality of regional transit services.

Initial Assessment

This report does not provide any historical data related to the quality of transit services in the region. A baseline is established (2002) for transit travel in major travel corridors, including center-to-center transit travel times, general purpose and HOV lane travel times, and average headways. It is worthwhile to note that when comparing general purpose and HOV lane travel times, the results show benefits in travel-time savings in most of the HOV lanes but most significantly on I-5, I-405, SR 520 and SR 167. Collected over time, this information will allow future decision makers to assess the relative improvements that transit can achieve within corridors. Of course, variables beyond travel times and headways also influence the quality of transit services that are available. Reliability, comfort, cost, and other considerations are all part of a traveler's decision to use transit.

Some of the transit improvements that could, over time have, a positive impact on the quality of public transit in the region include:

- New direct access freeway ramps, transit signal prioritization and an HOV lane network functioning as a system of interconnected facilities that should provide transit riders with increased reliability.
- The establishment of the Puget Pass program, which allows customers to purchase a regional pass good for travel on several transportation systems, could help make inter-system transfers

easier. Transit agencies in the region are also working toward using a smart card technology that will further enhance coordination between systems.

- Investments such as the introduction of commuter rail, regional express bus routes, and HOV improvements are making it easier for riders to use transit for longer, regional trips. Plans for future light rail investments will further expand these regional connections.

Policy Implications

Destination 2030 policies call for greater frequency of services, increased reliability, convenient connections, and better transit travel times relative to single occupant vehicle travel. Various policies directly and indirectly address the quality of transit services that should be provided to meet these plan objectives. Terms should be clearly defined and individual policies could provide more specific direction.

5. Access — Facilitate access to transit services for all travel modes.

Transit accessibility is a measure of how fast, easy, and convenient it is for people to get to available transit services. Plan policy emphasizes the need to consider all travel mode connections, including auto access, feeder bus connections, walking, and biking. The plan calls for a variety of investments that will improve facilities that support better access, such as park-and-ride lots, transit transfer stations, walking paths, street crossings, and biking routes. In addition, there is considerable direction for promoting land development patterns that improve transit accessibility by putting more homes, stores, and jobs in close proximity to transit services. Specifically, there is direction for pedestrian friendly design and transit oriented development within regional growth centers and in the vicinity of major regional transit stations.

Initial Assessment

This report does not include much information that is directly related to improved accessibility to transit services in the region. Future reports will include additional data to establish a better assessment of access issues to transit. However, some measures are included in this report that provide indicators of transit access. For example, park-and-ride lot capacity has steadily increased since 1990 and a significant expansion in capacity is planned over the next 30 years. Many of the larger park-and-ride facilities within major travel corridors are operating at full capacity each day and demand is continuing to grow. Significant investments have also been made in regional transit centers and direct HOV access ramps. The availability of more bike parking and/or storage facilities has expanded bicycle access to transit service. Most of the major park-and-ride and all of the major transit centers provide some accommodation for bike storage and all of the transit agencies equip their fixed route buses with bike racks.

Future *Puget Sound Milestones* reports should provide additional data that will help evaluate progress toward better local transit access. For example, ongoing analysis of land use patterns related to transit services would be useful to measure over time. According to Census 2000 data, 330,700 jobs are located within ½ mile of the existing transit centers in the region. This accounts for approximately 20 percent of the total employment in the region. In contrast, less than 5 percent of all households (56,200) are within ½ mile of a transit center. Tracking land use development patterns for both jobs and households will expand our understanding of the relative accessibility of transit, especially for non-auto access.

Another issue related to transit access involves signage. A transit partnership that includes Sound Transit, King County Metro, Pierce Transit, Everett Transit, Community Transit, Amtrak, Washington State Ferries, and the Washington State Department of Transportation has worked



together to develop a consistent signage program for regional transit facilities. Implemented in 2004, the Regional T icon identifies regional transportation hubs throughout King, Pierce and Snohomish counties. In addition to the Sound Transit facilities (light rail, commuter rail, and express bus stations), transit agencies have identified 36 other existing transit facilities throughout the three-county area that qualify as regional transportation hubs.

Policy Implications

Destination 2030 policies call for investments that will improve facilities that support better access, such as park-and-ride lots, sidewalks, street crossings, and biking routes.

The plan should more clearly describe how to facilitate convenient connections, providing specific guidance for each component of the metropolitan transportation system, between and within urban centers. Goals could be established for concentrating jobs and/or households within close proximity to planned services.

SUMMARY AND NEXT STEPS

Population growth, economic expansion, and traffic congestion over the last decade have helped to generate demand for public transit. But travel trends, land development patterns, low gas prices, and auto ownership rates have challenged transit providers' ability to compete with other travel modes. Changes in the revenue structure (State MVET to local sales tax) of each agency have also significantly influenced transit operations over this time period. Given these challenges, public transit has made progress during the 1990s toward achieving regional policy objectives. Transit providers throughout the region have increased service levels and added facilities, expanded ridership, maintained efficiency, improved quality of service, and increased overall access to public transportation. Much more needs to be done and significant additional investments are planned.

Transit has a significant role in regional travel although it may account for a relatively small percentage of total daily trips. A primary contribution of transit is to provide access to major activity centers during peak travel periods when freeways are at full capacity. If transit is able to capture a small increase in the share of total trips, it can have an enormous impact on the ability of our overburdened transportation network to accommodate the mobility needs of the region's residents. In particular, the difference that transit can make will not be measured in regionwide averages; it will be measured in specific locations and at certain times of the day. If transit can continue to provide an attractive option in the region's most congested corridors and at peak travel periods, then this is where it can make the most difference.

Future reports will focus on a more detailed look at transit performance, measuring performance along congested travel corridors linking major concentrations of growth in centers. The ability of transit to capture greater market share in these markets will tell the story of how well transit contributes to broader regional objectives and expanding travel choices.